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Forest Statistics for Kentucky--1975 and 1988

Carol L. Alerich

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Abstract

A statistical report on the fourth forest inventory of Kentucky conducted in 1986-87 by the Forest Inventory and Analysis Unit, Northeastern Forest Experiment Station. Statistics for forest area, numbers of trees, wildlife habitat, tree biomass, volume, growth, change, and timber products output are displayed at the state and, when appropriate, at the unit and county levels. The current inventory indicates that the state has approximately 16.0 billion cubic feet of growing-stock volume on 12.3 million acres of timberland. For use in trend analysis, this report includes estimates derived from reprocessing the 1975 data using current methods and standards.

Foreword

The fourth inventory of Kentucky was under the overall direction of John R. Peters, Project Leader of the Forest Inventory and Analysis Unit. Charles T. Scott was responsible for the design of the inventory and sample selection. David J. Alerich supervised the interpretation of aerial photos and collection of data. He was assisted by Robert E. Ilgenfritz and Joseph G. Reddan. Members of the data collection staff were:

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Carol L. Alerich applied FINSYS (Forest INventory SYStem), a generalized data processing system, to the specific needs of the Kentucky inventory and produced summary tables for the state and counties. Rosemary K. Venit rewrote parts of the FINSYS table generating routine. Sandra L. Richter prepared the graphics for this report. Marie Pennestri was responsible for administrative and secretarial services. Dorelle Smith typed the text for this report. Eric H. Wharton and Robert L. Nevel, Jr., with the assistance of Stephen C. Kayse, Kentucky Division of Forestry, collected and compiled the data on timber products output and timber removals.

The Forest Inventory and Analysis Unit would like to thank the landowners of Kentucky and the Kentucky Division of Forestry, Natural Resources and Environmental Protection Cabinet, for their cooperation and assistance during this inventory.

Forest Statistics for Kentucky--1975 and 1988

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Highlights

Forest Land Area

- Fifty percent (12.7 million acres) of Kentucky's total land area is forest land.
- Of the 12.7 million acres of forest land, 97 percent (12.3 million acres) is classified as timberland (formerly known as commercial forest land).
- Timberland has increased 3.7 percent since the previous inventory.
- Sawtimber stands make up 58 percent of the timberland area. This is a 35 percent increase in the area of sawtimber stands since the last inventory. Sapling and seedling stands have decreased 46 percent since 1975 to where they currently compose 16 percent of the timberland area. The area of poletimber stands has increased 12 percent to make up 26 percent of the timberland area.
- The oak/hickory forest-type group is the most common in Kentucky, making up 77 percent of the timberland area at both occasions.
- Ninety-three percent of the timberland area in Kentucky is privately owned.

Biomass

- The net dry weight of all live trees on timberland in Kentucky is 631.3 million tons or 51.1 tons per acre. Softwoods account for 36.3 million tons or 2.9 tons per acre; hardwoods account for 595.0 million tons or 48.2 tons per acre.
- 395.3 million tons, or 63 percent of the net dry weight of all live trees, is in growing-stock material. Of the remaining 236.0 million tons of all-live-tree weight, 58 percent is in growing-stock tops, 27 percent is in saplings, and 15 percent is in cull trees.
- An additional 9.9 million tons of biomass is contained in salvable dead trees.

Timber Volume

* Growing-stock volume in the state is 16.0 billion cubic feet, which is an average of 1,293 cubic feet per acre. This is an 18 percent increase over the 1975 inventory.

* Sawtimber volume is 45.8 billion board feet, which is an average of 3,710 board feet per acre. This is a 32 percent increase over the 1975 inventory.

* Select white oaks (see Oaks of the Northeast, page 14) increased 14 percent to 2.0 billion cubic feet in volume to become one of two most common species groups or species, making up 12 percent of the total cubic-foot volume. Yellow-poplar showed a 56 percent increase in volume to 2.0 billion cubic feet, also contributing 12 percent to the total cubic-foot volume.

* Sawtimber stands contain 72 percent of the growing-stock volume, where in 1975 this stand size held 62 percent of the volume.

* Hardwood sawtimber volume quality of all size trees has remained relatively constant, with 28 percent of the hardwood volume being of log grade 2 or better quality at both occasions.

* The volume of sawtimber trees that are fifteen inches or larger, 27.8 billion board feet, is 61 percent of the total sawtimber volume. The quality of the hardwood sawtimber volume has declined slightly from 1975. In 1975, 39 percent of the volume was of log grade 2 or better quality, and in 1988, 35 percent is in log grade 2 or log grade 1.

Growth and Removals

* The average annual net growth of growing-stock volume, 383.5 million cubic feet, is 31.1 cubic feet per acre per year, and is 2.4 percent of the inventory.

* Average annual net growth of sawtimber volume is 3.3 percent of the inventory.

* Average annual board-foot removals is 1.3 percent of the inventory.

* The sawtimber volume growth to removals ratio is 2.6 to 1.

Introduction

Under the authority of the McSweeny-McNary Forest Research Act of 1928 and subsequent acts, including the Renewable Resources Planning Act of 1974 and the Renewable Resources Research Act of 1978, the USDA Forest Service conducts periodic forest inventories of all states to provide up-to-date information on the forest resource of the Nation. The initial inventory of Kentucky's resources was conducted in 1949 by the Central States Forest Experiment Station. The second inventory was completed in 1963 by that same station. The third inventory was made in 1973, 1974, and 1975 by the Northeastern Forest Experiment Station. This report presents the forest resource data from the fourth inventory, which was carried out in 1986 and 1987. This inventory involved a cooperative effort of the Kentucky Division of Forestry and the Northeastern Forest Experiment Station.

The Forest Inventory and Analysis Unit of the Northeastern Forest Experiment Station conducted the inventory on all forest land, developed the resource tables, and prepared this report.

The sampling procedure used during the current inventory utilized aerial photography, the remeasurement of a sample of ground plots established in earlier inventories, and establishment of new ground plots. In Kentucky, this required classification of 68,252 new points and reclassification of 1,283 ground plot locations from the previous inventory on aerial photography into land-use and cubic-foot volume classes. Then, 1,283 ground plots from the previous inventory were remeasured and 1,766 new ground plots, which are a subsample of the new photo points, were established. The data collected were summarized using the FINSYS computer system developed at the Northeastern Forest Experiment Station.

The resurvey of Kentucky's forest resources involved several associated studies and considerable analysis. Reports discussing the State's private forest-land owners and its primary forest products industry are being prepared.

The forest area, numbers of trees, wildlife habitat, biomass, timber volume, growth, change, and timber products output statistics shown in this report are a summary of the information collected. (See **List of Available Tables**, at back of report.) Other information or additional summaries may be developed. For information about these, contact the **Forest Inventory and Analysis Unit, USDA Forest Service, 5 Radnor Corporate Center, Suite 200, 100 Matsonford Road, Radnor, Pa 19087**.

The four eastern Forest Experiment Stations have agreed to include a set of 25 core tables in each of their state resource bulletins. The format of any one of these tables will be identical for all 37 states in the Stations' territories. Rather than being grouped as a set, these core tables have been interspersed throughout this publication according to their level of data and content. The index to this report contains a list of tables and the corresponding core table number as presented in this publication.

Reliability of the Estimates

The data in this report were based on a carefully designed sample of forest conditions throughout Kentucky. However, because the field crews did not measure every tree or every acre in the state, the data are estimates. The reliability of the estimating procedure can be judged by two important statistical measures: accuracy and precision. Among statisticians, accuracy refers to the success of estimating the true value, precision refers to the clustering of sample values about their own averages or to the variation among repeated samples. We are mainly interested in the accuracy of the inventory, but in most cases we can only measure its precision.

Although accuracy cannot be measured exactly, it can be checked. Preliminary tables are sent to other agencies and to outside experts familiar with the resources of Kentucky. If questions arise, the data are reviewed and reanalyzed to resolve the differences. Also, great care is taken to keep all sources of procedural error to a minimum by careful training of both field and office personnel, frequent inspection of field and office work, and application of the most reliable inventory methods.

Because of the care exercised in the inventory process, estimates of precision afford a reasonable measure of the inventory's adequacy. The precision of each estimate is described by its sampling error. Sampling errors are given with several tables in this report. The others are available upon request.

Briefly, here is an example of how the sampling error is used to indicate reliability: The estimate of timberland for Kentucky is 12,347,400 acres. The associated sampling error is 0.8 percent, or 98,800 acres. This means that if there are no errors in the procedure and we repeated the inventory in the same way, the odds are 2 to 1 (66 percent probability) that the estimate would be between 12,248,600 and 12,446,200 acres (12,347,400 ±98,800). Similarly, the odds are 19 to 1 (95 percent probability) that the estimate would be within ±197,600 acres. It is worth noting that the state estimates have the smallest sampling errors and, therefore, are the most precise or reliable. County estimates are less reliable. In Kentucky, for example, the sampling error for timberland at the state level is 0.8 percent, while the sampling error for Allen county is 15.0 percent. In general, as the size of the estimate decreases in relation to the total, the sampling error, expressed as a percentage of the estimate, increases.

In most of the tables in this report, both the last column and last row are labeled "SE". These figures are the sampling errors of the column and row totals. The last sampling error given (SE) is for the table total (T). To calculate the approximate sampling error (se) for a table cell (X), use the following formula **(This formula is reliable only for estimating sampling errors of individual cells in AREA tables)**:

$$se = SE(T/X)^{1/2}$$

where:

T = estimated table total (sum over all cells in table)
SE = sampling error of T
X = estimate for a table cell
se = approximate sampling error of X, in percent

Any estimate with a sampling error of 50 percent or more is not significantly different from zero, and those estimates with errors between 25 and 50 percent are suspect. Therefore, any estimates that have errors exceeding 25 percent should be used with caution.

Comparison Between Inventories

To evaluate the condition of the forest resource, it is useful to compare the current estimates with those from the previous inventory. However, for the comparisons to be valid, the procedures used in the two inventories must be similar. As a result of our ongoing efforts to improve the efficiency of the inventory, we have made several changes in procedures and definitions since 1975.

Because these changes make the direct comparison of the current estimates with those published by Kingsley and Powell (1978) inappropriate, data collected in 1973-75 were reprocessed using the 1988 procedures and are published here. The changes that have had an effect on the results of our computations follow:

> A major change was made in the design of the plots established in 1986-87. In addition to the traditional data gathered to estimate forest area and tree volumes, information was collected to describe forest wildlife habitat and forest tree biomass.
>
> New height and volume equations were developed for both growing stock and sawtimber (Scott 1979, 1981). These equations are derived by nonlinear regression techniques; in 1975 linear regression was used. The nonlinear method is used because it yields estimates with smaller errors between predicted and actual values.
>
> Stand size is a classification (seedling/sapling, poletimber, sawtimber, or nonstocked) of forest land based on the size of the trees that dominate an area. In the 1975 inventory only growing-stock trees were considered in determining stand size; the 1988 procedure considers all live trees. This

change caused a shift in acres among classes.

The procedures used to determine forest type also have been modified. In 1975, plots on which red maple made up the plurality of stocking were put into the elm/ash/red maple group. In 1988, such plots were examined more closely and, according to their moisture class and the other species present, were placed in either the northern hardwoods group (red maple/northern hardwoods), oak/hickory group (red maple/central hardwoods), or elm/ash/red maple group.

The basic building block for estimating forest area and timber volume has been changed from the state level or geographic-unit level to the county level. In the past, the statistics were developed at the state or unit level and prorated back to the county level on the basis of distribution of photo-interpretation points. Direct development of county-level data helps users interested in more precise local data, but can make comparisons with past county estimates developed by the proration technique uncertain.

One of the prerequisites for developing county-level statistics is that a county must have at least 60,000 acres of timberland. Counties that do not meet this criterion have too few plots to allow reliable estimates. Such counties are grouped with a neighboring county or counties to form a sampling base large enough to provide reliable estimates. Boyd and Greenup counties in the Northern Cumberland Unit are examples of such a sampling base.

A new method was used in Kentucky for redeveloping 1975 volume estimates. Eighty-three percent of the plots that were new at the previous occasion were remeasured in 1986-87. Because of this large remeasurement, the net growth and net change estimates are strong. The new method is to take the net change estimate away from the current estimate to arrive at an estimate for the previous occasion (1975). This gives an opportunity to look at real change from occasion to occasion, rather than the difference between estimates taken at two different occasions based on different procedures. This does, however, present a different estimate than what was published for 1975.

Another reason for this different estimate for 1975 from what was published may be be due to the fact that, on the average, the height measurements by diameter class were lower at last occasion than at this occasion. The growth of a tree is based on the current height, with the previous height being calculated from the current height using a regression. This eliminates bias that occurs when a tree is measured at different occasions with potentially different inventory procedures.

Definitions of Terms

Acceptable tree. (a) Live sawtimber trees that do not qualify as preferred trees but are not cull trees. (b) Live poletimber trees that prospectively will not qualify as preferred trees, but are not now or prospectively cull trees.

Accretion. The estimated net growth on growing-stock trees that are measured during the previous inventory, divided by the number of growing seasons between surveys. It does not include the growth on trees that were cut during the period, nor those trees that died.

Agricultural/herbaceous land. Land with herbaceous plant cover, both grasses and/or forbs, including cropland, pasture land, and natural grass lands.

Aquatic edge. An edge condition created when a terrestrial land use abuts a lake, pond, river, stream, or major wetland.

Basal-area class. A classification of forest land in terms of basal area (cross sectional area of a tree stem at breast height in square feet per acre) of all live trees of all sizes.

Board foot. A unit of lumber measurement 1 foot long, 1 foot wide, and 1 inch thick, or its equivalent.

Board-foot stand-volume class. A classification of forest land in terms of net board-foot volume of sawtimber trees per acre.

Bog/Marsh/Swamp. Land that has less than 10.0 percent stocking with live trees; and which characteristically supports low, generally herbaceous or shrubby vegetation, and which is intermittently covered with water during all seasons; includes tidal areas that are covered with salty or brackish water during high tides.

Browse. Forage resource; defined here as current twig growth of woody-stemmed plants occurring between 1 and 8 feet in height.

Cabin log. A relatively slender roundwood product that is cut to standard sizes; meets specifications of strength, straightness, and soundness; and is finished for use in constructing cabins, barns, and other buildings.

Coarse residues. Manufacturing residues suitable for chipping, such as slabs, edgings, and veneer cores.

Commercial species. Tree species presently or prospectively suitable for industrial wood products. Excludes species of typically small size, poor form, or inferior quality, such as hawthorn or sumac.

Condition class. Classification of trees based on live or dead and condition of top of the tree (i.e. intact, broken, dead).

Cord. See *Standard cord*.

County and municipal lands. Lands owned by counties and local public agencies or municipalities or leased to them for 50 years or more.

Cropland. Land that currently supports agricultural crops including silage and feed grains, bare farm fields resulting from cultivation or harvest, and maintained orchards.

Cubic-foot stand-volume class. A classification of forest land in terms of net cubic-foot volume of all live trees per acre.

Cull tree. A rotten or rough tree. See *Rotten tree* and *Rough tree*.

Cull increment. The net volume of growing-stock trees in the previous inventory that became rough or rotten trees in the current inventory, divided by the number of growing seasons between surveys.

Cultural land. Land with human development as the major land cover; includes industrial, commercial, and residential land uses.

Diameter at breast height (d.b.h.). The diameter outside bark of a standing tree measured at 4.5 feet above the ground.

Dry ton. A unit of measure of dry weight equivalent to 2,000 pounds or 907.1848 kilograms.

Dry ton stand-volume class. A classification of forest land in terms of net dry weight of the aboveground components of all live trees per unit area. It is usually expressed in dry tons per acre.

Dry weight. The weight of wood and bark as it would be if it had been oven-dried. It is usually expressed in pounds or tons.

Farmer-owned lands. Lands owned by farm operators, whether part of the farmstead or not. Excludes land leased by farm operators from nonfarm owners.

Federal lands. Lands (other than National Forests) administered by Federal agencies.

Fine residues. Manufacturing residues not suitable for chipping, such as sawdust and shavings.

Forest industry lands. Lands owned by companies or individuals that operate primary wood-using plants.

Forest land. The total of timberland and all noncommercial forest land (productive reserved forest land and woodland).

Forest type. A classification of forest land based on the species that form a plurality of live tree basal area stocking.

Forest-type group. A combination of forest types that share closely associated species or site requirements. The many forest types in this state were combined into the following major forest-type groups (the descriptions apply to forests in this state):

a. *White/red pine*--forests in which white pine, hemlock, or red pine make up the plurality of the stocking, singly or in combination; common associates include red spruce, maple, and yellow-poplar.

b. *Spruce/fir*--forests in which red spruce, northern white-cedar, balsam fir, white spruce, black spruce, or tamarack, singly or in combination, make up a plurality of the stocking; common associates include yellow birch and red maple.

c. *Loblolly/shortleaf pine*--forest in which loblolly, shortleaf, or other southern yellow pines (except longleaf or slash pine), singly or in combination, comprise a plurality of the stocking; common associates include hickory and maple.

d. *Oak/pine*--forest in which northern red oak or white ash, singly or in combination, make up a plurality of the stocking but where pines or eastern redcedar contribute 25 to 50 percent of the stocking; hemlock, maple, sweet birch, and yellow-poplar are associates.

e. *Oak/hickory*--forests in which upland oaks, red maple (when associated with central hardwoods), or hawthorn, singly or in combination, make up a plurality of the stocking and in which white pine makes up less than 25 percent of the stocking; common associates include hard pines, hemlock, maple, birch, hickory, and yellow-poplar.

f. *Oak/gum/cypress*--forests in which tupelo, blackgum, sweetgum, oak, or southern cypress, singly or in combination, make up a plurality of the stocking; common associates include hickory, maple, yellow-poplar, and beech.

g. *Elm/ash/red maple*--forests in which black ash, elm, red maple (when growing on wet sites), willow, or green ash, singly or in combination, make up a plurality of the stocking; common associates include sugar maple, hickory, yellow-poplar, and black cherry.

h. *Northern hardwoods*--forests in which sugar maple, beech, yellow birch, red maple (when associated with northern hardwoods), pin cherry, or black cherry, singly or in combination, make up a plurality of the stocking; common associates include hard pines, hemlock, hickory, ash, and yellow-poplar.

i. *Aspen/birch*--forests in which aspen, paper birch, or gray birch, singly or in combination, make up a plurality of the stocking.

Fuelwood. Round, split, or chipped woody material (with or without bark) that is converted to household, commercial, or industrial energy.

Geographic unit. A county or a group of counties within a state that is large enough to provide an adequate sample that will yield statistically reliable estimates of timberland area, volume, and components of change.

Green ton. A unit of measure of green weight equivalent to 2,000 pounds or 907.1848 kilograms.

Green ton stand-volume class. A classification of forest land in terms of net green weight of the aboveground components of all live trees per unit area. It is usually expressed in green tons per acre.

Green weight. The weight of wood and bark as it would be if it had been recently cut. It is usually expressed in pounds or tons.

Gross growth. The sum of accretion and ingrowth.

Growing-stock trees. Live trees of commercial species classified as sawtimber, poletimber, saplings, or seedlings; that is, all live trees of commercial species except rough and rotten trees.

Growing-stock volume. Net volume, in cubic feet, of growing-stock trees 5.0 inches d.b.h. and larger from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs. Net volume equals gross volume, less deduction for cull.

Hardwoods. Dicotyledonous trees, usually broad-leaved and deciduous.

Harvested cropland. All land from which crops were harvested or hay was cut and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products.

Idle farmland. Former cropland or pasture that has not been tended within the last 2 years and has less than 10.0 percent stocking with live trees (established seedlings or larger trees), regardless of species.

Improved/maintained pasture. Land that is currently used and maintained for grazing (not including grazed cropland).

Indian lands. (a) Lands held in trust by the United States or States for Indian tribes or individual Indians. (b) Lands owned in fee by Indian tribes whether subject to Federal or State restrictions against alienation or not.

Industrial and commercial land. Supply yards, parking lots, factories, etc.

Industrial products. All roundwood products except fuelwood.

Ingrowth. The estimated net volume of growing-stock trees that became 5.0 inches d.b.h. or larger during the period between inventories, divided by the number of growing seasons between surveys.

International 1/4-inch rule. A log rule or formula for estimating the board-foot volume of logs. The mathematical formula is:

$$(0.22D^2 - 0.71D)(0.904762)$$

for 4-foot sections, where D=diameter inside bark at the small end of the log section. This rule is used as the USDA Forest Service standard log rule in the Eastern United States.

Land area. (a) Bureau of Census: The area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, estuaries, and canals less than 1/8 statute mile wide; and lakes, reservoirs, and ponds less than 40 acres in area. (b) Forest Inventory and Analysis: same as (a) except that the minimum width of streams, etc., is 120 feet, and the minimum size of lakes, etc., is 1 acre.

Land-use edge. A condition created by the juxtaposition of two differing land uses.

Logging residues. The unused portions of growing-stock trees harvested or killed in the process of logging.

Manufacturing plant residues. Wood materials that are generated when round timber (roundwood) is converted into wood products. This includes slabs, edgings, trimming, bark, miscuts, sawdust, shavings, veneer cores and clippings, and pulp screening. If these residues are used, they are referred to as plant by-products.

Mast. Seed produced by woody-stemmed perennial plants, generally refers to soft (fruit) and hard (nuts) mast.

Mining and waste land. Surface mining, gravel pits, dumps.

Miscellaneous private lands. Privately owned lands other than forest industry and farmer-owned lands.

Mortality. The estimated net volume of growing-stock trees at the previous inventory that died from natural causes before the current inventory, divided by the number of growing seasons between surveys.

National Forest lands. Federal lands legally designated as National Forests or purchase units and other lands administered as part of the National Forest System by the USDA Forest Service.

Net change. The difference between the current and previous inventory estimates of growing-stock volume, divided by the number of growing seasons between surveys. Components of net change are ingrowth plus accretion, minus mortality, minus cull increment, minus removals.

Net dry weight. The dry weight of woody material less the weight of all unsound (rotten) material.

Net green weight. The green weight of woody material less the weight of all unsound (rotten) material.

Net growth. The change, resulting from natural causes, in growing-stock volume during the period between surveys, divided by the number of growing seasons. Components of net growth are ingrowth plus accretion, minus mortality, minus cull increment.

Noncensus water. Streams/rivers between 120 feet and 1/8 mile in width, and bodies of water between 1 and 40 acres in size. The Bureau of the Census classifies such water as land.

Noncommercial forest land. Productive reserved forest land and woodland.

Noncommercial species. Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial wood products.

Nonforest land. Land that has never supported forests, or land formerly forested but now in nonforest use such as cropland, pasture, residential areas, or highways.

Nonsalvable dead tree. A dead tree with most or all of its bark missing that is at least 5.0 inches in diameter at breast height and is at least 4.5 feet in height.

Nonstocked area. A stand-size class of forest land that is stocked with less than 10 percent of minimum full stocking with all live trees.

Other cropland. Includes cropland used for cover crops and soil improvement (legumes).

Other farmland. All nonforest land on a farm excluding cropland, pasture, and idle farmland; includes farm lanes, stock pens, and farmsteads.

Ownership class. A classification of forest land based upon ownership and nature of business or control of decision-making for the land. It encompasses all types of legal entities having ownership interest in the land, whether public or private.

Pasture land. Includes any pasture land other than cropland and woodland pasture. Can include lands that had lime fertilizer or seed applied; had been improved by irrigation, drainage, or control of weeds and brush.

Pastured cropland. Includes rotation pasture and grazing land that would have been used for crops without additional improvement.

Pastured timberland. Land that is partially developed, maintained, or managed for pasture and grazing, but which continues to meet the definition of timberland.

Piling (piles). Relatively slender structural roundwood products that are cut to the maximum length possible (within top circumference and other specifications of strength, straightness, and soundness) that when nearly buried in the ground provide vertical or lateral support for buildings, foundations, bridges, docks, and other structures.

Plant by-products. Wood products, such as pulp chips, recycled from manufacturing plant residues.

Poletimber stand. A stand-size class of forest land that is stocked with at least 10 percent of minimum full stocking with all live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of poletimber exceeds that of sawtimber.

Poletimber trees. Live trees of commercial species meeting regional specifications of soundness and form and at least 5.0 inches in d.b.h., but smaller than sawtimber trees.

Preferred tree. A high-quality tree, from a lumber viewpoint, that would be favored in cultural operations. General characteristics include grade 1 butt log (if sawtimber size), good form, good vigor, and freedom from serious damage.

Productive reserved forest land. Forest land sufficiently productive to qualify as timberland, but withdrawn from timber utilization through statute, administrative designation; land exclusively used for Christmas tree production.

Primary manufacturing plant. A plant that converts round timber into wood products such as woodpulp, lumber, veneer, cooperage, and dimension products.

Pulpwood. Roundwood converted into 4- or 5-foot lengths or chips, and chipped plant byproducts that are prepared for manufacture into woodpulp.

Reclaimed timberland. Forest land sufficently productive to qualify as timberland that shows signs of being land that was mined and reclaimed.

Recreation site. Parks, campgrounds, playing fields, tracks, etc.

Removals. The net growing-stock volume harvested or killed in logging, cultural operations (such as timber stand improvement) or land clearing, and also the net growing-stock volume neither harvested nor killed but growing on land that was reclassified from timberland to noncommercial forest land or nonforest land during the period between surveys. This volume is divided by the number of growing seasons.

Rights-of-way. Highways, pipelines, powerlines, canals.

Rotten tree. A live tree of commercial species that does not contain at least one 12-foot sawlog or two noncontiguous sawlogs, each 8 feet or longer, now or prospectively, and does not meet regional specifications for freedom from defect primarily because of rot; that is, more than 50 percent of the cull volume in the tree is rotten.

Rough tree. (a) The same as a rotten tree, except that a rough tree does not meet regional specifications for freedom from defect primarily because of roughness or poor form; also (b) a live tree of noncommercial species.

Roundwood products. Logs, bolts, total tree chips, or other round timber generated by harvested trees for industrial or consumer uses.

Salvable dead trees. A tree at least 5.0 inches in diameter at breast height that has recently died and still has fairly tight bark. The tree may be standing, fallen, windthrown, knocked down, or broken off.

Sampling error. A measure of the reliability of an estimate, expressed as a percentage of the estimate. The sampling errors given in this report correspond to one standard deviation and are calculated as the square root of the variance, divided by the estimate, and multiplied by 100.

Saplings. Live trees 1.0 inch through 4.9 inches d.b.h.

Sapling-seedling stand. A stand-size class of forest land that is stocked with at least 10 percent of minimum full stocking with all live trees with half or more of such stocking in saplings or seedlings or both.

Sawlog. A log meeting regional standards of diameter, length, and freedom from defect, including a minimum 8-foot length and a minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods. (See specifications under Log-Grade Classification.)

Sawlog portion. That part of the bole of a sawtimber tree between the stump and the sawlog top; that is, the merchantable height.

Sawlog top. The point on the bole of a sawtimber tree above which a sawlog cannot be produced. The minimum sawlog top is 7.0 inches diameter outside bark (d.o.b.) for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber stand. A stand-size class of forest land that is stocked with at least 10 percent of minimum full stocking with all live trees with half or more of such stocking in poletimber or sawtimber trees or both, and in which the stocking of sawtimber is at least equal to that of poletimber.

Sawtimber trees. Live trees of commercial species at least 9.0 inches d.b.h. for softwoods or 11.0 inches for hardwoods, containing at least one 12-foot sawlog or two noncontiguous 8-foot sawlogs, and meeting regional specifications for freedom from defect.

Sawtimber volume. Net volume in board feet, by the International 1/4-inch rule, of sawlogs in sawtimber trees. Net volume equals gross volume less deductions for rot, sweep, and other defects that affect use for lumber.

Seedlings. Live trees less than 1.0-inch d.b.h. and at least 1 foot in height.

Shrub. Woody-stemmed perennial plant, generally with no well-defined main stem and less than 12 feet in height at maturity; defined by species.

Shrub land. Land with shrub and/or tree cover and an obvious herbaceous understory; average canopy height of less than 25 feet and crown closure of less than 70 percent.

Single-family/custom house. House sheltering one family and immediately adjacent managed land.

Snag. Standing dead tree, with most or all of its bark missing that is at least 5.0 inches in diameter and at least 4.5 feet tall (does not include salvable dead).

Softwoods. Coniferous trees, usually evergreen and having needles or scalelike leaves.

Stand. A group of forest trees growing on forest land.

Stand-area class. The area, contiguous to the plot, that is of the same overall stand size and major type group (hardwood, softwood, or uniform mixture of both).

Standard cord. A unit of measure for stacked bolts of wood, encompassing 128 cubic feet of wood, bark, and air space. Fuelwood cord estimates can be derived from cubic-foot estimates of growing stock by applying an average factor of 80 cubic feet of solid wood per cord. For pulpwood, a conversion of 85 cubic feet of solid wood per cord is used because pulpwood is more uniform.

Standard-lumber log grade. A classification of sawtimber quality based on standard sawlog grades for hardwoods, white pine, and southern pine. (Note: Red pine was graded using the southern pine guidelines. All specifications are shown under Log-Grade Classification.)

State lands. Lands owned by the State or leased to the State for 50 years or more.

Stocking. The degree of occupancy of land by trees, measured by basal area and/or number of trees in a stand compared to the basal area and/or number of trees required to fully use the growth potential of the land (or the stocking standard). In the Eastern United States this standard is 75 square feet of basal area per acre for trees 5.0 inches d.b.h. and larger, or its equivalent in numbers of trees per acre for seedlings and saplings.

Two categories of stocking are used in this report: all live trees and growing-stock trees. The relationships between the classes and the percentage of the stocking standard are: nonstocked = 0 to 9, poorly stocked = 10 to 59, moderately stocked = 60 to 99, fully stocked = 100 to 129, and overstocked = 130 to 160.

Strip mine. Area devoid of vegetation due to current or recent general excavation.

Stump. The main stem of a tree from ground level to 1 foot above ground level, including the wood and bark.

Timberland. Forest land producing or capable of producing crops of industrial wood (more than 20 cubic feet per acre per year) and not withdrawn from timber utilization. Formerly known as commercial forest land.

Timber products. Roundwood (round timber) products and manufacturing plant by-products harvested from growing-stock trees on timberland; from other sources, such as cull trees, salvable dead trees, limbs, tops, and saplings; and from trees on noncommercial forest and nonforest lands.

Timber removals. The growing-stock or sawtimber volume of trees removed from the inventory for roundwood products, plus logging residues, volume destroyed during land clearing, and volume of standing trees on land that was reclassified from timberland to noncommercial forest land (See Table 50).

Top. The wood and bark of a tree above the merchantable height (or above the point on the stem 4.0 inches in diameter outside bark). It generally includes the uppermost stem, branches, and twigs of the tree, but not the foliage.

Tract/multiple family housing. Multiple individual residential units or attached units (e.g. apartment buildings, condominiums) and immediately adjacent managed land.

Transportation right-of-way. Land associated with highways and railroads.

Tree class. A classification of the quality or condition of trees for sawlog production. Tree class for sawtimber trees is based on their present condition. Tree class for poletimber trees is a prospective determination--a forecast of their potential quality when they reach sawtimber size (11.0 inches d.b.h. for hardwoods, 9.0 inches d.b.h. for softwoods).

Tree grade. A classification of sawtimber quality based on guidelines for tree grades for hardwoods, white pine, and southern pine. (Note: Red pine was graded using the southern pine guidelines. All specifications are shown under Tree-Grade Classification.)

Trees. Woody plants that have well-developed stems and are usually more than 12 feet in height at maturity.

Unused manufacturing residues. Plant residues that are dumped or destroyed and not recovered for plant by-products.

Upper-stem portion. That part of the main stem or fork of a sawtimber tree above the sawlog top to a diameter of 4.0 inches outside bark, or to the point where the main stem or fork breaks into limbs.

Urban timberland. Forest land sufficiently productive to qualify as timberland that is completely surrounded by or nearly surrounded by urban development (not parks), whether commercial, industrial, or residential.

Utility right-of-way. Land associated with pipeline and electric transmission lines; identified only if vegetative cover differs from adjacent land use.

Veneer log or bolt. A roundwood product from which veneer is sliced or sawn that usually meets certain minimum standards of diameter, length, and defect.

Volume suitable for pulpwood. The sound volume (only rotten cull excluded) of growing-stock and rough trees.

Windbreak/hedgerow. Linear areas, less than 120 feet in width, with predominantly tree and/or shrub vegetation.

Woodland. Forest land that is incapable of producing 20 cubic feet per acre per year of industrial wood under natural conditions, because of adverse site conditions (formerly known as unproductive forest land).

References

Kingsley, Neal, P.; Powell, Douglas S. 1978. **The forest resources of Kentucky**. Resour. Bull. NE-54. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 97 p.

Scott, Charles T. 1979. **Northeastern forest survey board-foot volume equations**. Res. Note NE-271. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 3 p.

Scott, Charles T. 1981. **Northeastern forest survey revised cubic-foot volume equations**. Res. Note NE-304. Broomall, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 3 p.

Oaks of the Northeast

Species Group	Common Name
Select White Oaks	
Quercus alba	white oak
Q. bicolor	swamp white oak
Q. macrocarpa	bur oak
Q. michauxii	swamp chestnut oak
Q. muehlenbergii	chinkapin oak
Select Red Oaks	
Q. falcata var. *pagodifolia*	cherrybark oak
Q. rubra	northern red oak
Q. shumardii	shumard oak
Other White Oaks	
Q. lyrata	overcup oak
Q. prinus	chestnut oak
Q. stellata	post oak
Other Red Oaks	
Q. coccinea	scarlet oak
Q. ellipsoidalis	northern pin oak
Q. falcata	southern red oak
Q. ilicifolia *	bear oak
Q. imbricaria	shingle oak
Q. laurifolia *	laurel oak
Q. marilandica	blackjack oak
Q. nigra *	water oak
Q. palustris	pin oak
Q. phellos	willow oak
Q. velutina	black oak

* Species not naturally occurring in Kentucky.

Tree Species of Kentucky (as encountered on field plots)

Scientific Name ***	Common Name(s)	Occurrence **
	Softwoods	
Juniperus virginiana L.	eastern redcedar	c
Pinus echinata Mill.	shortleaf pine	c
P. resinosa Ait.	red pine	vr
P. rigida Mill.	pitch pine	c
P. strobus L.	eastern white pine	r
P. sylvestris L.	Scotch pine	vr
P. taeda L.	loblolly pine	r
P. virginiana Mill.	Virginia pine	c
Taxodium distichum (L.) Rich.	baldcypress	vr
Tsuga canadensis (L.) Carr.	eastern hemlock	r
	Hardwoods	
Acer negundo L.	boxelder	c
A. nigrum Michx. f.	black maple	vr
A. pensylvanicum L.*	striped maple	vr
A. rubrum L.	red maple	vc
A. saccharinum L.	silver maple	c
A. saccharum Marsh.	sugar maple	vc
Aesculus L.	buckeye	c
Ailanthus altissima (Mill.)Swingle*	ailanthus	vr
Amelanchier Medic.*	serviceberry	r
Betula alleghaniensis Britton	yellow birch	vr
B. lenta L.	sweet birch (black birch)	r
B. nigra L.	river birch	r
Carpinus caroliniana Walt.*	American hornbeam	r
Carya Nutt.	hickory	vc
Castanea dentata (Marsh.)Borkh.*	American chestnut	vr
Catalpa Scop.*	catalpa	vr
Celtis taevigata Willd.	sugarberry	r
Celtis occidentalis L.	hackberry	c
Cercis canadensis L.	eastern redbud	c
Cornus florida L.	flowering dogwood	c
Crataegus L.*	hawthorn	vr
Diospyros virginiana L.*	persimmon	r
Fagus grandifolia Ehrh.	American beech	c
Fraxinus americana L.	white ash	c
F. nigra Marsh.	black ash	vr

Tree Species of Kentucky (continued)

Scientific Name ***	Common Name(s)	Occurrence **
F. pennsylvanica Marsh.	green ash	c
F. quadrangulata Michx.	blue ash	r
Gleditsia triacanthos L.	honeylocust	r
Gymnocladus dioicus (L.) K. Koch	Kentucky coffeetree	r
Juglans cinerea L.	butternut	r
J. nigra L.	black walnut	c
Liquidambar styraciflua L.	sweetgum	c
Liriodendron tulipifera L.	yellow-poplar (tulip tree)	vc
Maclura pomifera (Raf.)	osage-orange	r
Magnolia L.	magnolia	r
M. acuminata L.	cucumbertree	r
Malus Mill.	apple	vr
Morus L.	mulberry	r
Nyssa sylvatica Marsh.	blackgum	c
Ostrya virginiana (Mill.)K. Koch*	eastern hophornbeam	r
Oxydendrum arboreum L. DC.	sourwood	c
Paulownia Sieb. & Zucc.	paulownia	vr
Platanus occidentalis L.	American sycamore	c
Populus deltoides Bartr. ex Marsh.	eastern cottonwood	r
P. grandidentata Michx.	bigtooth aspen	r
P. heterophylla L.	swamp cottonwood	vr
Prunus pensylvanica L. f.*	pin cherry	vr
P. serotina Ehrh.	black cherry	c
P. virginiana L.*	chokecherry	vr
Quercus alba L.	white oak	vc
Q. bicolor Willd.	swamp white oak	vr
Q. coccinea Muenchh.	scarlet oak	c
Q. ellipsoidalis E. J. Hill	northern pin oak	vr
Q. falcata Michx.	southern red oak	c
Q. falcata var *pagodifolia* Ell.	cherrybark oak	r
Q. imbricaria Michx.	shingle oak	r
Q. lyrata Walt.	overcup oak	vr
Q. macrocarpa Michx.	bur oak	vr
Q. marilandica Muenchh.*	blackjack oak	r
Q. michauxii Nutt.	swamp chestnut oak	vr
Q. muehlenbergii Engelm.	chinkapin oak	c
Q. palustris Muenchh.	pin oak	r
Q. phellos L.	willow oak	r
Q. prinus L.	chestnut oak	vc
Q. rubra L.	northern red oak	c

Tree Species of Kentucky (continued)

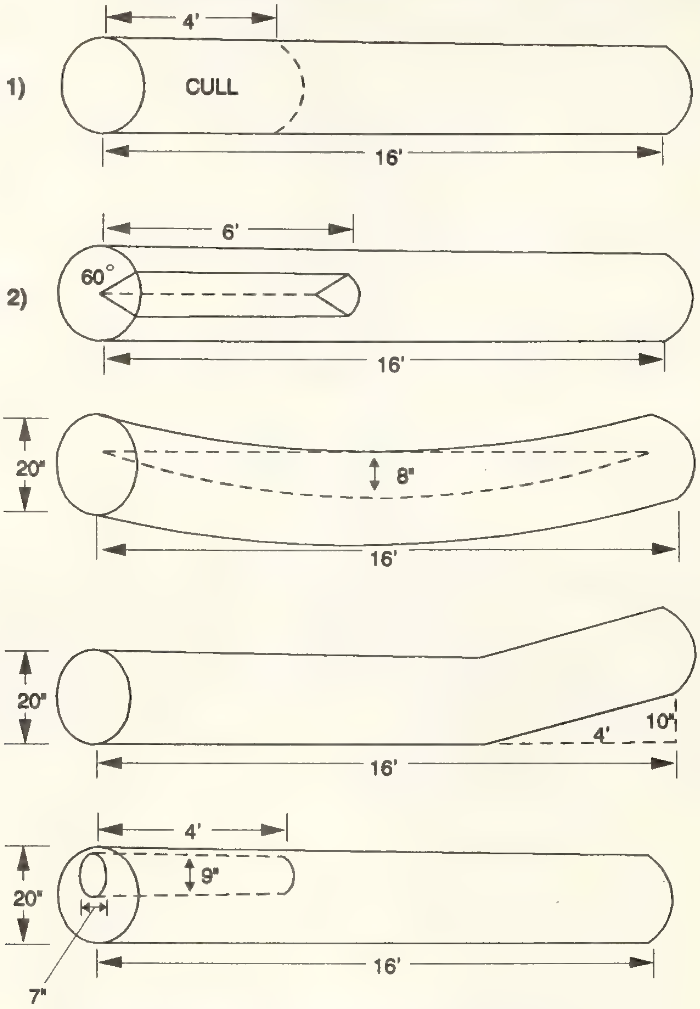
Scientific Name ***	Common Name(s)	Occurrence **
Q. shumardii Buckl.	shumard oak	vr
Q. stellata Wangenh.	post oak	c
Q. velutina Lam.	black oak	c
Robinia pseudoacacia L.	black locust	c
Salix spp. Marsh.*	willow	vr
Salix nigra Marsh.	black willow	r
Sassafras albidum (Nutt.) Nees	sassafras	c
Tilia americana L.	American basswood	c
Ulmus L.	elm	r
Ulmus alata Michx.	winged elm	r
U. americana L.	American elm	c
U. rubra Muhl.	slippery elm	c
U. thomasii Sarg.	rock elm	r

*** Names according to: Little, Elbert L., Jr. 1979. Checklist of United States Trees (native and naturalized). Agric. Handb. 541. Washington, DC: U.S Department of Agriculture, Forest Service. 375 p.

** Occurrence is based on the proportion of the species among all live trees 5.0 inches d.b.h. or larger encountered on forest survey field plots: vr = very rare (0.05%), r = rare (0.05 to 0.49%), c = common (0.5 to 4.9%), and vc = very common (>5.0%).

* Noncommercial species.

Methods of determining scaling deduction.
(Examples based on a 16-foot log with 20-inch scaling diameter)



	Percent Deduction
Defect section (rule 1)	$= \frac{4}{16} = 25\%$
Defect section (rule 2)	$= \frac{6}{16} \times \frac{60}{360} = 6\ 1/4\%$
Sweep (rule 3)	$= \frac{8-2}{20} = 30\%$
Crook (rule 4)	$= \frac{10}{20} \times \frac{4}{16} = 12\ 1/2\%$
Interior defect (rule 5)	$= \frac{(8)\,(10)}{(20-1)^2} \times \frac{4}{16} = 5\ 5/9\%$

From: Grosenbaugh, L. R. 1952. Shortcuts for cruisers and scalers. U.S. Dep. Agric. For. Serv. South. For. Exp. Stn. Occas. Pap. 126.

SPRUCE, FIR, CEDAR, TAMARACK, AND HEMLOCK LOGS

Minimum Merchantability Specifications for Grade One Logs

DIB [1]	Length [2]	Total deduction	Sweep permitted	Other requirements
6" - 12"	8' - 16' in 2-foot multiples.	50%	25%	Sound knots not over 2" in diameter permitted. Shake permitted up to 20% of gross scale if not combined with other serious defect.
13" +	8' - 16' in 2-foot multiples.	50%	25%	Sound knots not over 3" in diameter permitted. Shake permitted up to 20% of gross scale if not combined with other serious defect.

1...at small end of log.
2...without trim.

Log-Grade Classification (continued)

STANDARD GRADES FOR HARDWOOD FACTORY LUMBER LOGS

Grading Factors		Log grades							
		F1			F2				F3
Position in tree		Butts only	Butts & uppers		Butts & uppers				Butts & uppers
Scaling diameter, inches		13-15[a]	16-19	20+	11+[b]	12+			8+
Length without trim, feet		10+			10+	8-9	10-11	12+	8+
Required clear cuttings[c] of each of 3 best faces[d]	Min. length, feet	7	5	3	3	3	3	3	2
	Max. number	2	2	2	2	2	2	3	No limit
	Min. proportion of log length required in clear cutting	5/6	5/6	5/6	2/3	3/4	2/3	2/3	1/2
Maximum sweep & crook allowance	For logs with less than $^1/_4$ of end in sound defects	15%			30%				50%
	For logs with more than $^1/_4$ of end in sound defects	10%			20%				35%
Maximum scaling	deduction	40%[e]			50%[f]				50%

End defects although not visible in standing trees, are important in grading cut logs. Instructions for dealing with this factor are contained in Forest Prod. Lab. Rpt. D 1737.

[a] Ash and basswood butts can be 12 inches if they otherwise meet requirements for small #1's.

[b] Ten-inch logs of all species can be #2 if they otherwise meet requirements for small #1's.

[c] A clear cutting is the portion of a face, extending the width of the face, that is free of defects.

[d] A face is $^1/_4$ of the surface of the log as divided lengthwise.

[e] Otherwise #1 logs with 41-60% deductions can be #2.

[f] Otherwise #2 logs with 51-60% deductions can be #3.

From: Vaughan, C. L., A. C. Wollin, K. A. McDonald, and E. H. Bulgrin. 1966. Hardwood log grades for standard lumber. USDA For. Serv. Res. Pap. FPL-63.

STANDARD SPECIFICATIONS FOR HARDWOOD CONSTRUCTION LOGS [a]

Position in tree		Butt & upper
Min. diameter, small end		8 inches +
Min. length, without trim		8 feet
Clear cuttings		No requirements.
Sweep allowance, absolute		1/4 diameter small end for each 8 feet of length
Sound surface defects	Single knots	Any number, if no one knot has an average diameter above the callus in excess of 1/3 of log diameter at point of occurrence.
	Whorled knots	Any number if sum of knot diameters above the callus does not exceed 1/3 of log diameter at point of occurrence.
	Holes	Any number provided none has a diameter over 1/3 of log diameter at point of occurrence, and none extends over 3 inches into included timber.[b]
Unsound surface defects		Same requirements as for sound defects if they extend into included timber.[b] No limit if they do not.
End defects	Sound	No requirements.
	Unsound	None allowed; log must be sound internally, but will admit 1 shake not to exceed 1/4 the scaling diameter and a longitudinal split not extending over 5 inches into the contained timber.

[a] These specifications are minimum for the class. If, from a group of logs, factory logs are selected first, thus leaving only nonfactory logs from which to select construction logs, then the quality range of the construction logs so selected is limited, and the class may be considered a grade. If selection for construction logs is given first priority, then it may be necessary to subdivide the class into grades.

[b] Included timber is always square, and dimension is judged from small end.

From: Rast, E. D., D. L. Sonderman, and G. L. Gammon. 1973. A guide to hardwood log grading (Revised). USDA For. Serv. Gen. Tech. Rep. NE-1.

EASTERN WHITE PINE SAWLOG GRADE SPECIFICATIONS

GRADING FACTOR	LOG GRADE 1	LOG GRADE 2	LOG GRADE 3	LOG GRADE 4
(1) Minimum scaling diameter (inches)	14 [1]	6	6	6
(2) Minimum log length (feet)	10 [2]	8	8	8
(3) Maximum weevil injury (number)	None	None	2 injuries [3]	No limit
(4) Minimum face requirements	Two full length or four 50% length good faces.[4] (In addition, log knots on balance of faces shall not exceed size limitations of grade 2 logs.)	No **GOOD** faces required. Maximum diameter of log knots on three best faces: **SOUND RED KNOTS** not to exceed 1/6 scaling diameter and 3 inch maximum. **DEAD OR BLACK KNOTS** including overgrown knots not to exceed 1/12 scaling diameter and $1\frac{1}{2}$ inch maximum.	**SOUND RED KNOTS** not to exceed 1/3 scaling diameter and 5 inch maximum. **DEAD OR BLACK KNOTS** including overgrown knots not to exceed 1/6 scaling diameter and $2\frac{1}{2}$ inch maximum.	Includes all logs not qualifying for No. 3 or better and judged to have at least one-third of their gross volume in sound wood suitable for manufacture into standard lumber.
(5) Maximum sweep or crook allowance (percent)	20	30	40	$66\frac{2}{3}$
(6) Maximum total scaling deduction (percent)	50	50	50	$66\frac{2}{3}$

After the tentative log grade is established from face examination, the log will be reduced in grade whenever the following defects are evident:

(7) Conks, punk knots, and pine borer damage on bark surface [5]

Degrade one grade if present on one face.
Degrade two grades if present on two faces.
Degrade three grades if present on three or more faces.

(8) Log end defects: red rot, ring shake, heavy stain and pine borer damage outside heart center of log[5]

Consider log as having a total of 8 quarters (4 on each end) and degrade as indicated below:
Degrade one grade if present in 2 quarters of log ends.
Degrade two grades if present in 3 or 4 quarters of log ends.
Degrade three grades if present in 5 or more quarters of log ends.

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[1] 12 and 13 inch logs with four full length good faces are acceptable.

[2] 8 foot logs with four full length good faces are acceptable.

[3] 8 foot No. 3 logs limited to one weevil injury.

[4] Minimum 50% length good face must be at least 6 feet.

[5] Factors 7 and 8 are not cumulative (total degrade based on more serious of the two). No log to be degraded below grade 4 if net scale is at least one-third gross log scale.

From: Ostrander, M. D., and R. L. Brisbin, 1971. Sawlog grades for eastern white pine. USDA For. Serv. Res. Pap. NE-205.

SOUTHERN PINE SAWLOGS

GRADE 1 -	Logs with 3 or 4 clear faces.[1] Code 1.
GRADE 2 -	Logs with 1 or 2 clear faces. Code 2.
GRADE 3 -	Logs with no clear faces. Code 3.

After the tentative log grade is established from above, the log will be degraded one grade for each of the following, except that no log can be degraded below grade 3.

1. SWEEP - Degrade any tentative 1 or 2 log one grade if sweep amounts to 3 or more inches and equals or exceeds one third (1/3) the diameter inside the bark at small end. This is the final grade if there is no evidence of heart rot.

2. HEART ROT - Degrade any tentative 1 or 2 log one grade if conk, massed hyphae, or other evidence of advanced heart rot is found anywhere in it.

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[1] A face is one-fourth of the circumference in width extending full length of the log. Clear faces are those free of: knots measuring more than one-half inch in diameter, overgrown knots of any size, holes more than one-fourth inch in diameter. The faces may be rotated if necessary to obtain the maximum number of clear ones.

From: Schroeder, J. G., R. A. Campbell, and R. C. Rodenbach. 1968. Southern pine sawlogs for yard and structural lumber. USDA For. Serv. Res. Pap. SE-39.

Tree-Grade Classification

HARDWOOD TREE GRADES

GRADE FACTOR	TREE GRADE 1	TREE GRADE 2	TREE GRADE 3
Length of grading zone (feet)	Butt 16	Butt 16	Butt 16
Length of grading section[a] (feet)	Best 12	Best 12	Best 12
Minimum DBH (inches)	16[b]	13	10
Minimum diameter inside bark at top of grading section (inches)	13[b] 16 20	11[c] 12	8
Clear cuttings on 3rd best face[d]			
minimum length (feet)	7 5 3	3 3	2
number on face (maximum)	2	2 3	unlimited
yield in face length (minimum)	5/6	4/6	3/6
Cull deduction, including crook and sweep but excluding shake, maximum within grading section (%)	9	9[e]	50

[a] Whenever a 14- or 16-foot section of the butt 16-foot log is better than the best 12-foot section, the grade of the longer section will become the grade of the tree. This longer section, when used, is the basis for determining the grading factors, such as diameter and cull deduction.

[b] In basswood and ash, diameter inside bark at the top of the grading section must be 12 inches and DBH must be 15 inches.

[c] Grade 2 trees can be 10 inches diameter inside bark at the top of the grading section if otherwise meeting surface requirements for small grade 1's.

[d] A clear cutting is a portion of a face free of defects, extending the width of the face. A face is one-fourth of the surface of the grading section as divided lengthwise.

[e] Fifteen percent crook and sweep, or 40 percent total cull deduction are permitted in grade 2 if size and surface of grading section qualify as grade 1. If rot shortens the required clear cuttings to the extent of dropping the butt log to grade 2, do not drop the tree's grade to 3 unless the cull deduction for rot is greater than 40 percent.

HARDWOOD TREE GRADE 4 - Use STANDARD SPECIFICATIONS FOR HARDWOOD CONSTRUCTION LOGS under Log-Grade Classification

Tree-Grade Classification (continued)

EASTERN WHITE PINE TREE GRADE SPECIFICATIONS

GRADING FACTOR	TREE GRADE 1	TREE GRADE 2	TREE GRADE 3	TREE GRADE 4
(1) Minimum DBH (inches)	10	10	10	10
(2) Maximum weevil injury in butt 16-ft. section (number)	None	None	2 injuries	No limit
(3) Minimum face requirements on butt 16-ft. section	Two full length or four 50% length good faces.[1] (In addition, knots on balance of faces shall not exceed size limitations of Grade 2 sections.)	No **GOOD** faces required. Maximum diameter of log knots on three best faces:		Includes all trees not qualifying for Grade 3 or better and judged to have at least one-third of their gross volume in sound wood suitable for manufacture into standard lumber.
		SOUND RED KNOTS not to exceed 1/6 scaling diameter and 3 inch maximum.[2] **DEAD OR BLACK KNOTS** including overgrown knots not to exceed 1/12 scaling diameter and 1½ inch maximum.[2]	**SOUND RED KNOTS** not to exceed 1/3 scaling diameter and 5 inch maximum.[2] **DEAD OR BLACK KNOTS** including overgrown knots not to exceed 1/6 scaling diameter and 2½ inch maximum.[2]	
(4) Maximum sweep or crook in butt 16-ft. section (percent)	20	30	40	No limit
(5) Maximum total scaling deduction in butt 16-ft. section (percent)	50	50	50	No limit

After the tentative grade of the section is established from face examination, the section will be reduced in grade whenever the following defects are evident:

(6) Conks, punk knots, and pine borer damage on surface of section[3]

Degrade one grade if present on one face.
Degrade two grades if present on two faces.
Degrade three grades if present on three or more faces.

(7) If the final grade of the grading section is 1, 2, or 3, examine the tree for weevil injuries in the merchantable stem *above* 16 ft. If the total apparent weevil injuries exceed three, degrade the tree one grade below the section grade.[3] Otherwise the tree grade is the same as the final section grade.

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[1] Trees under 16 inches DBH require four full length good faces.

[2] Scaling diameter is estimated at the top of the 16-foot grading section.

[3] No tree will be designated below Grade 4 unless net tree scale is less than one-third of gross tree scale.

Tree-Grade Classification (continued)

SOUTHERN PINE TREE GRADES

Grade 1 - trees with 3 or 4 clear faces on the 16-foot grading section.

Grade 2 - trees with 1 or 2 clear faces on the 16-foot grading section.

Grade 3 - trees with no clear faces on the 16-foot grading section.

After the tentative grade is established, the tree will be reduced one grade for each of the following:

(1) Sweep. Degrade any tentative Grade 1 or 2 tree one grade if sweep in the lower 12 feet of the grading section amounts to 3 or more inches and equals or exceeds one-fourth the diameter at breast height.

(2) Heart rot. Degrade any tentative Grade 1 or 2 tree one grade if conks, punk knots, or other evidence of advanced heart rot is found anywhere on the tree stem.

NOTE: No tree can be degraded below Grade 3, provided the total scaling deductions for sweep and/or rot do not exceed two-thirds the gross scale of the tree. Trees with total scaling deductions in excess of two-thirds are classified as cull.

A face is one-fourth the circumference of the 16-foot grading section and extends the full length of the grading section. Clear faces are those free from knots measuring more than 1/2 inch in diameter, overgrown knots of any size, and holes more than 1/4 inch in diameter. Faces may be rotated, if necessary, to obtain the maximum number of clear faces on the grading section.

One-log trees should be graded by using the Southern Pine Log Grades. This is recommended because the entire merchantable volume of the tree is contained in the graded section. The log grading system gives a more accurate prediction of the lumber grade-yields for such trees than would the tree grading system.

SPRUCE, FIR, CEDAR, TAMARACK, AND HEMLOCK TREE GRADE

Use specifications found under Log-Grade Classification.

TREE GRADE 5 (ALL SPECIES)

Any tree which does not make tree grade 1,2, or 3 (or 4).

Metric Equivalents

1 acre = 4,046.86 square meters
1 acre = 0.404686 hectares
1,000 acres = 404.686 hectares
1,000,000 acres = 404,686 hectares
1 board foot = 0.00348 cubic meters
1 board foot = 3,480 cubic centimeters
1,000 board feet = 3.48 cubic meters
1,000,000 board feet = 3,480 cubic meters
1 cubic foot = 0.028317 cubic meters
1,000 cubic feet = 28.317 cubic meters
1,000,000 cubic feet = 28,317 cubic meters
1 cord (wood, bark, and air space) = 3.6246 cubic meters
1 cord (solid wood, pulpwood) = 2.4069 cubic meters
1 cord (solid wood, other than pulpwood) = 2.2654 cubic meters
1,000 cords (pulpwood) = 2,406.9 cubic meters
1,000 cords (other products) = 2,265.4 cubic meters
1 inch = 2.54 centimeters or 0.0254 meters
1 foot = 30.48 centimeters or 0.3048 meters
1 mile = 1.609 kilometers
1 square foot = 929.03 square centimeters
1 square foot = 0.0929 square meters
1 square foot per acre basal area = 0.229568 square meters per hectare
1 cubic foot per acre = 0.0699 cubic meters per hectare
1 ton = 907.1848 kilograms
1,000 tons = 907.1848 metric tons
Breast height = 1.4 meters above ground level

Although 1,000 board feet is theoretically equivalent to 2.36 cubic meters, this is true only when a board foot is actually a piece of wood with a volume 1/12 of a cubic foot. The International 1/4-inch log rule is used by the USDA Forest Service in the East to estimate the product potential in board feet. The reliability of the estimate obtained by conversion will vary with the size of the log measure. The conversion given here, 3.48 cubic meters, is based on the cubic volume of a log 16 feet long and 15 inches in diameter inside bark (d.i.b.) at the small end. This conversion could be used for average comparisons when accuracy of 10 percent is acceptable. Because the board foot unit is not a true measure of wood volume and because products other than dimension lumber are becoming important, this unit may eventually be phased out and replaced by the cubic meter.

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STATE TABLES

Land area by land class, Kentucky, 1988

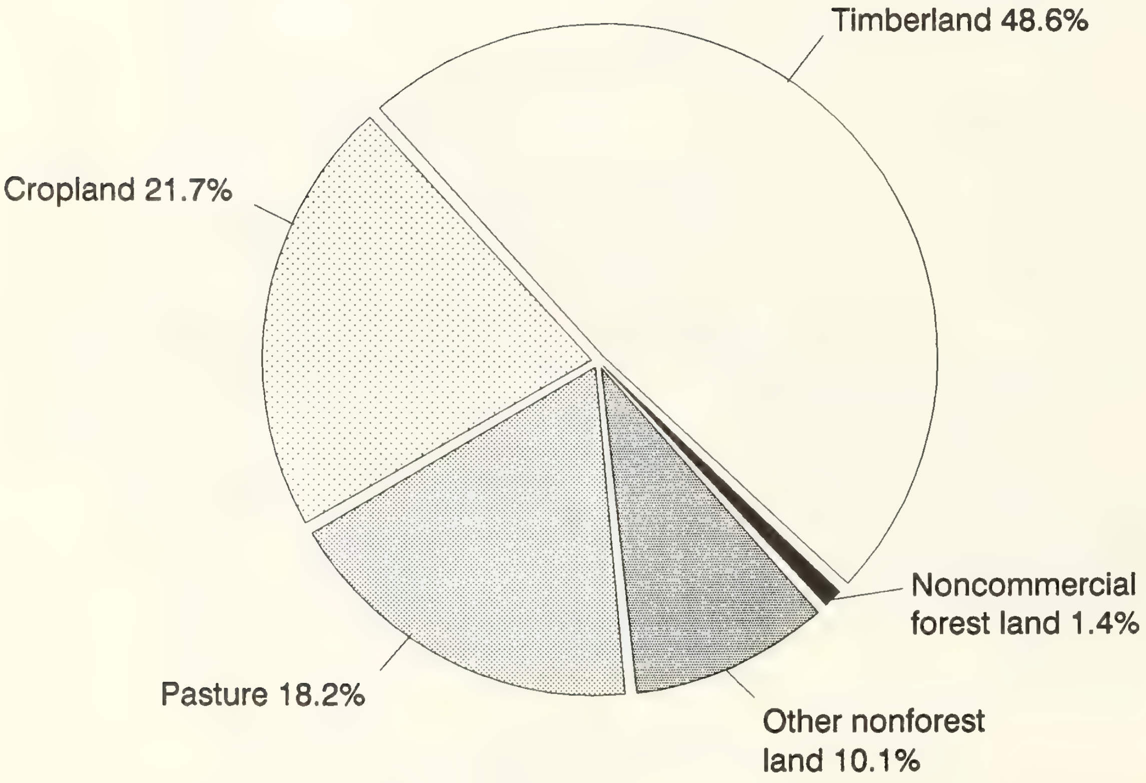


Table 1.--Land area by land class, Kentucky, 1988[a]

(In thousands of acres)

Land class	Area	
	Thousand acres	Percent
Timberland	12,347.4	48.6
Noncommercial forest land		
Productive reserved	315.5	1.3
Woodland[b]	36.5	.1
Total forest	12,699.4	50.0
Nonforest land		
Cropland[c]	5,497.9	21.7
Pasture[d]	4,634.6	18.2
Other	2,556.4	10.1
Total nonforest	12,688.9	50.0
Total land area[e]	25,388.3	100.0

[a] Rows and columns in all tables may not sum due to rounding.

[b] Formerly known as unproductive forest land. Includes 1,092 acres of reserved woodland.

[c] Includes harvested cropland and other cropland. Source : 1987 Census of Agriculture.

[d] Includes cropland used only for pasture or grazing, and pasture and rangeland other than cropland and wooded pasture. Source : 1987 Census of Agriculture.

[e] Source : 1981 United States Department of Commerce, Bureau of Census.

Table 2.--Area of timberland by forest type, forest-type group, and stand-size class, Kentucky, 1975

(In thousands of acres)

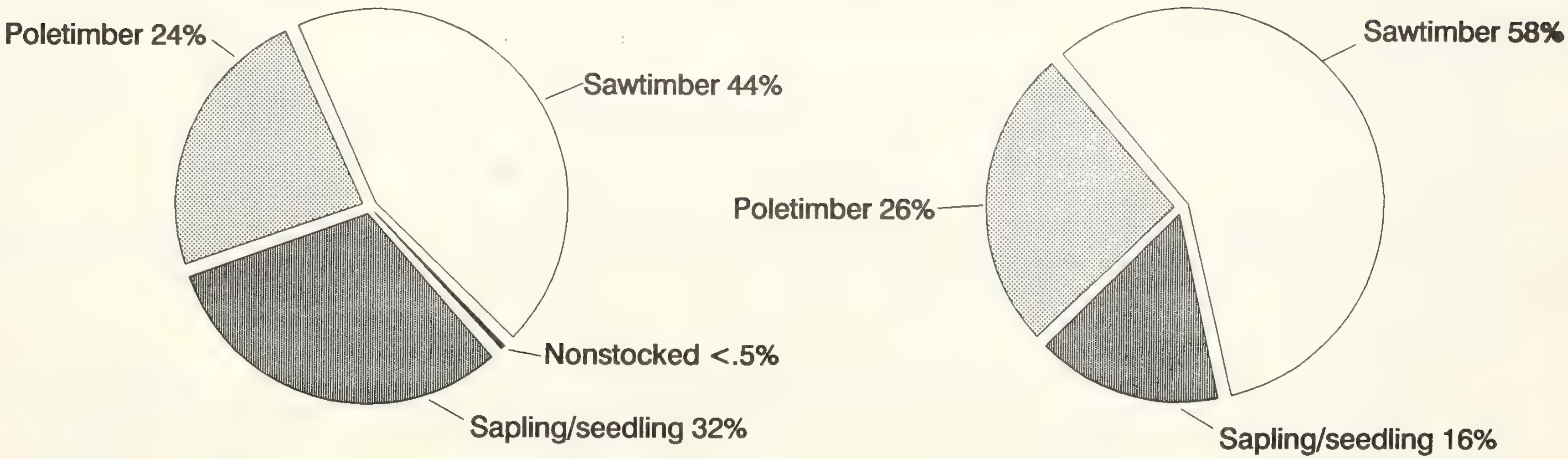
Forest type	*Stand-size class*				*All classes*
	Saw-timber	*Pole-timber*	*Sapling and seedling*	*Non-stocked*	
Hemlock	*14.3*	*.0*	*.0*	*.0*	*14.3*
White/red pine group	*14.3*	*.0*	*.0*	*.0*	*14.3*
Loblolly pine	*.0*	*12.5*	*.0*	*.0*	*12.5*
Shortleaf pine	*71.8*	*12.0*	*130.7*	*.0*	*214.5*
Virginia pine	*93.9*	*43.8*	*90.5*	*.0*	*228.2*
Eastern redcedar	*14.6*	*12.5*	*141.1*	*.0*	*168.2*
Pitch pine	*47.8*	*8.1*	*.0*	*.0*	*55.9*
Loblolly/shortleaf group	*228.1*	*89.0*	*362.4*	*.0*	*679.4*
Wh. pine/no. red oak/wh. ash	*12.6*	*.0*	*.0*	*.0*	*12.6*
Eastern redcedar/hardwood	*12.4*	*52.8*	*153.5*	*.0*	*218.6*
Shortleaf pine/oak	*59.9*	*23.4*	*35.9*	*.0*	*119.1*
Virginia pine/oak	*111.1*	*80.9*	*121.7*	*.0*	*313.7*
Loblolly pine/hardwood	*.0*	*21.3*	*18.6*	*.0*	*39.9*
Other oak/pine	*37.5*	*12.0*	*46.5*	*.0*	*96.0*
Oak/pine group	*233.5*	*190.4*	*376.1*	*.0*	*800.1*
Post, black, or bear oak	*113.3*	*151.9*	*118.2*	*.0*	*383.4*
Chestnut oak	*222.8*	*75.5*	*87.6*	*.0*	*385.9*
White oak/red oak/hickory	*541.3*	*447.6*	*339.4*	*.0*	*1,328.2*
White oak	*200.2*	*78.5*	*96.4*	*.0*	*375.1*
Northern red oak	*13.6*	*.0*	*12.6*	*.0*	*26.3*
Y. poplar/wh. oak/no. red oak	*52.0*	*81.2*	*92.8*	*.0*	*226.1*
Black locust	*.0*	*.0*	*18.0*	*.0*	*18.0*
Sweetgum/yellow-poplar	*.0*	*.0*	*19.5*	*.0*	*19.5*
Black walnut	*.0*	*.0*	*45.2*	*.0*	*45.2*
Yellow-poplar	*94.5*	*59.1*	*279.0*	*.0*	*432.6*
Hawthorn/reverting field	*.0*	*.0*	*23.7*	*.0*	*23.7*
Scarlet oak	*92.6*	*51.2*	*40.4*	*.0*	*184.2*
Sassafras/persimmon	*.0*	*.0*	*58.0*	*.0*	*58.0*
Red maple/central hardwoods	*37.4*	*.0*	*.0*	*.0*	*37.4*
Mixed central hardwoods	*2,973.3*	*1,318.9*	*1,333.8*	*.0*	*5,626.0*
Oak/hickory group	*4,341.0*	*2,263.9*	*2,564.5*	*.0*	*9,169.4*
Swamp chstnt oak/cherrybrk oak	*31.6*	*6.8*	*24.8*	*.0*	*63.2*
Sweetgm/nuttall oak/willow oak	*6.9*	*11.9*	*.0*	*.0*	*18.8*
Oak/gum/cypress group	*38.4*	*18.7*	*24.8*	*.0*	*82.0*
Black ash/Amer. elm/red maple	*105.4*	*43.0*	*101.9*	*.0*	*250.3*
Red maple(upland)	*.0*	*.0*	*13.7*	*14.6*	*28.3*
River birch/sycamore	*12.2*	*50.6*	*12.5*	*.0*	*75.3*
Cottonwood	*6.7*	*12.5*	*.0*	*.0*	*19.3*
Willow	*.0*	*26.8*	*24.5*	*.0*	*51.3*
Sycamore/pecan/American elm	*51.2*	*14.6*	*14.9*	*.0*	*80.7*
American elm/green ash	*19.3*	*54.4*	*63.7*	*.0*	*137.5*
Elm/ash/red maple group	*194.9*	*201.9*	*231.3*	*14.6*	*642.7*
Sugar maple/beech/yellow birch	*193.6*	*55.3*	*26.4*	*.0*	*275.3*
Black cherry	*.0*	*.0*	*6.5*	*.0*	*6.5*
Red maple/northern hardwoods	*12.0*	*.0*	*12.6*	*.0*	*24.7*
Pin cherry/reverting field	*.0*	*.0*	*29.2*	*.0*	*29.2*
Mixed northern hardwoods	*28.1*	*33.2*	*117.1*	*.0*	*178.4*
Northern hardwoods group	*233.7*	*88.5*	*191.9*	*.0*	*514.1*
All forest types	*5,283.8*	*2,852.4*	*3,751.0*	*14.6*	*11,901.9*

Table 3.--Area of timberland by forest type, forest-type group, and stand-size class, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Sawtimber	Poletimber	Sap/seed	Nonstocked		
White pine	.0	.0	13.1	.0	13.1	70.7
Hemlock	13.8	.0	.0	.0	13.8	56.4
Other pine types	.0	.0	9.7	.0	9.7	74.6
White/red pine group	13.8	.0	22.8	.0	36.6	38.5
Loblolly pine	27.4	6.8	28.6	.0	62.8	41.0
Shortleaf pine	46.5	35.1	31.4	.0	113.0	24.2
Virginia pine	136.1	53.3	49.2	.0	238.5	17.0
Eastern redcedar	28.9	87.2	45.8	.0	162.0	20.5
Pitch pine	41.3	20.3	7.6	.0	69.2	32.9
Loblolly/shortleaf group	280.2	202.7	162.6	.0	645.5	10.4
Wh. pine/no. red oak/wh. ash	10.4	.0	.0	.0	10.4	100.0
Eastern redcedar/hardwood	99.1	141.8	125.9	.0	366.8	13.7
Shortleaf pine/oak	74.9	22.7	12.8	.0	110.4	24.4
Virginia pine/oak	142.6	119.3	32.6	.0	294.5	15.3
Loblolly pine/hardwood	17.2	2.0	.0	.0	19.3	54.0
Other oak/pine	10.3	28.4	17.8	.0	56.5	33.4
Oak/pine group	354.6	314.1	189.2	.0	857.9	8.7
Post, black, or bear oak	172.8	43.7	45.7	.0	262.2	15.8
Chestnut oak	303.2	72.7	48.7	.0	424.6	12.3
White oak/red oak/hickory	783.5	358.3	185.3	.0	1,327.0	6.7
White oak	340.9	78.7	57.7	.0	477.3	12.2
Northern red oak	34.1	.0	11.5	.0	45.6	44.9
Y. poplar/wh. oak/no. red oak	194.0	67.5	60.6	.0	322.1	14.2
Black locust	7.8	19.3	77.6	.0	104.8	26.9
Sweetgum/yellow-poplar	24.8	54.3	20.8	.0	100.0	27.6
Black walnut	6.4	32.7	.0	.0	39.1	46.1
Yellow-poplar	289.5	136.0	68.9	.0	494.5	11.5
Hawthorn/reverting field	30.8	4.6	220.7	.0	256.0	18.5
Scarlet oak	78.0	25.7	26.3	.0	130.0	22.2
Sassafras/persimmon	.0	.0	37.9	.0	37.9	40.7
Red maple/central hardwoods	22.5	4.7	.0	.0	27.2	51.7
Mixed central hardwoods	3,464.0	1,430.8	572.8	.0	5,467.6	2.7
Oak/hickory group	5,752.4	2,329.1	1,434.4	.0	9,515.8	1.4
Swamp chstnt oak/cherrybrk oak	29.6	5.2	13.2	.0	48.0	38.5
Other oak/gum/cypress types	10.8	.0	.0	.0	10.8	71.3
Oak/gum/cypress group	40.4	5.2	13.2	.0	58.8	34.1
Black ash/Amer. elm/red maple	125.5	48.4	21.1	.0	195.0	18.9
Red maple(lowland)	6.7	.0	.0	.0	6.7	100.0
River birch/sycamore	77.0	31.6	24.4	.0	133.0	23.4
Cottonwood	15.6	7.7	.0	.0	23.3	50.9
Willow	4.6	3.2	.0	.0	7.8	71.9
Sycamore/pecan/American elm	36.6	14.2	25.9	.0	76.7	29.8
American elm/green ash	24.7	70.3	33.9	.0	128.9	24.9
Elm/ash/red maple group	290.7	175.3	105.3	.0	571.3	10.8
Sugar maple/beech/yellow birch	297.3	89.5	30.8	.0	417.6	13.1
Black cherry	17.9	11.0	7.7	.0	36.7	50.4
Red maple/northern hardwoods	9.9	.0	11.8	.0	21.7	65.1
Pin cherry/reverting field	5.7	10.0	8.4	.0	24.0	47.3
Mixed northern hardwoods	59.7	60.0	41.7	.0	161.4	20.3
Northern hardwoods group	390.5	170.5	100.4	.0	661.4	10.2
All forest types	7,122.6	3,196.9	2,027.9	.0	12,347.4	.8

Area of timberland by stand-size class, Kentucky, 1975 and 1988



1975

1988

Table 4.--Area of timberland by forest-type group and ownership class, Kentucky, 1988

(In thousands of acres)

Forest-type group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
White/red pine	12.9	.0	.0	23.7	36.6
Loblolly/shortleaf	41.7	30.2	.0	573.6	645.5
Oak/pine	60.9	28.8	12.0	756.2	857.9
Oak/hickory	435.7	241.4	172.3	8,666.4	9,515.8
Oak/gum/cypress	.0	.0	.0	58.8	58.8
Elm/ash/red maple	.0	21.7	7.7	541.9	571.3
Northern hardwoods	42.6	7.5	12.4	598.9	661.4
All groups	593.8	329.6	204.5	11,219.5	12,347.4

Table 5.--Area of timberland by stand-size class and ownership class, Kentucky, 1988

(In thousands of acres)

Stand-size class	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
Sawtimber	455.7	183.6	112.9	6,370.4	7,122.6
Poletimber	85.3	77.6	42.4	2,991.6	3,196.9
Sapling and seedling	52.8	68.4	49.2	1,857.5	2,027.9
All classes	593.8	329.6	204.5	11,219.5	12,347.4

Table 6.--Area of timberland by board-foot stand-volume class and ownership class, Kentucky, 1988

(In thousands of acres)

Stand-volume class	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
0 - 1,999	77.3	67.9	56.0	3,725.6	3,926.8
2,000 - 3,999	142.0	94.4	84.6	3,212.2	3,533.2
4,000 - 5,999	168.2	87.4	37.7	2,200.4	2,493.7
6,000 - 7,999	98.3	28.9	16.4	1,237.1	1,380.7
8,000 - 9,999	43.1	16.7	.0	484.2	544.0
10,000+	64.9	34.3	9.9	359.9	469.0
All classes	593.8	329.6	204.5	11,219.5	12,347.4

Table 7.--Area of timberland by stocking class of growing-stock trees and ownership class, Kentucky, 1988

(In thousands of acres)

Stocking class	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
Poorly stocked	1.8	23.4	36.6	901.4	963.2
Moderately stocked	142.4	103.1	47.6	4,038.2	4,331.3
Fully stocked	218.5	127.4	89.7	4,464.9	4,900.5
Overstocked	231.1	75.7	30.6	1,814.9	2,152.3
All classes	593.8	329.6	204.5	11,219.5	12,347.4

Area of timberland by ownership class, Kentucky, 1988

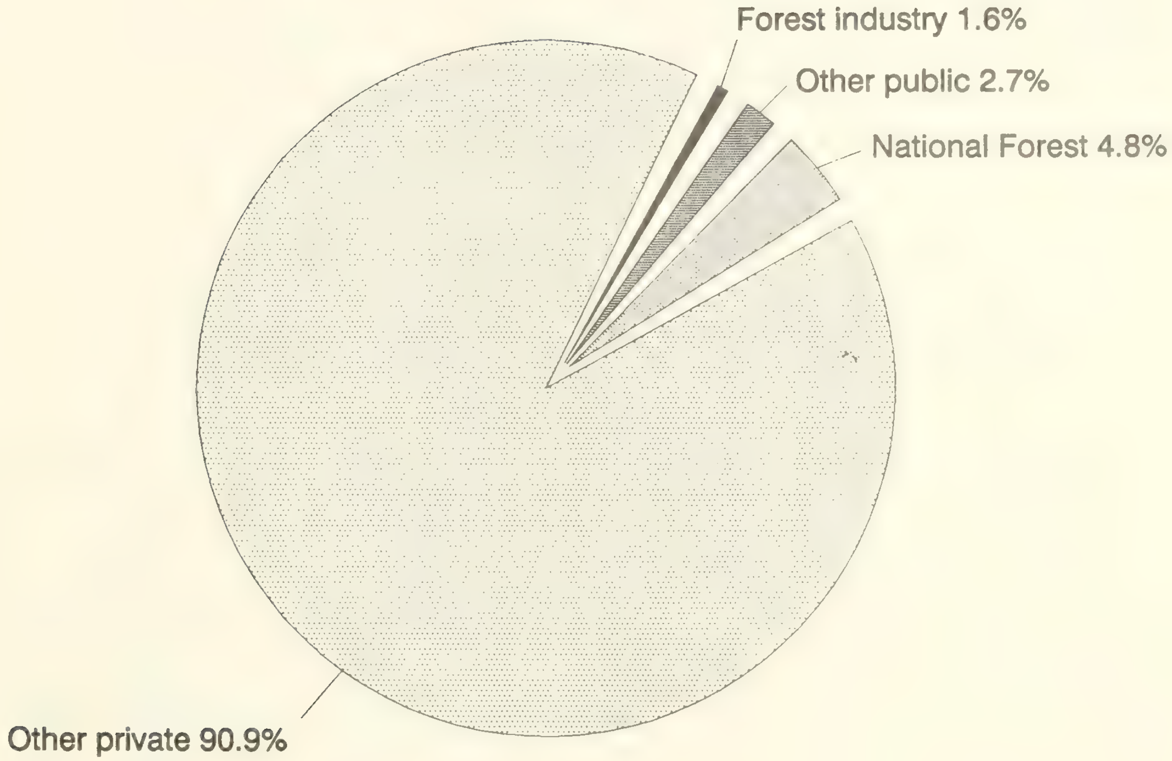


Table 8.--Area of timberland by forest-type group and cubic-foot stand-volume class, Kentucky, 1988

(In thousands of acres)

Forest-type group	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
White/red pine	22.8	.0	3.4	3.4	.4	6.5	36.6	38.5
Loblolly/shortleaf	133.0	209.4	132.7	86.2	44.0	40.3	645.5	10.4
Oak/pine	134.3	289.9	225.2	109.6	82.2	16.7	857.9	8.7
Oak/hickory	959.6	1,927.9	2,780.8	2,172.4	1,198.6	476.5	9,515.8	1.4
Oak/gum/cypress	.0	32.8	8.5	11.4	.0	6.1	58.8	34.1
Elm/ash/red maple	108.8	114.1	147.0	81.8	44.7	75.0	571.3	10.8
Northern hardwoods	83.4	117.6	175.5	172.2	62.5	50.3	661.4	10.2
All groups	1,441.9	2,691.6	3,473.1	2,636.9	1,432.3	671.5	12,347.4	.8
SE	6.9	4.5	3.8	4.6	6.4	9.7	.8	

Table 9.--Area of timberland by forest-type group and board-foot stand-volume class, Kentucky, 1988

(In thousands of acres)

Forest-type group	Stand-volume class (board feet per acre)						All classes	SE
	0-1999	2000-3999	4000-5999	6000-7999	8000-9999	10000+		
White/red pine	22.8	1.3	3.4	2.1	.4	6.5	36.6	38.5
Loblolly/shortleaf	367.6	152.0	88.0	24.5	13.4	.0	645.5	10.4
Oak/pine	474.0	198.2	102.3	55.3	21.4	6.7	857.9	8.7
Oak/hickory	2,625.2	2,874.2	2,091.1	1,136.2	426.9	362.3	9,515.8	1.4
Oak/gum/cypress	24.1	8.7	.0	19.9	6.1	.0	58.8	34.1
Elm/ash/red maple	226.1	133.8	53.8	53.5	43.8	60.3	571.3	10.8
Northern hardwoods	187.0	165.0	155.2	89.2	31.9	33.1	661.4	10.2
All groups	3,926.8	3,533.2	2,493.7	1,380.7	544.0	469.0	12,347.4	.8
SE	3.6	3.8	4.7	6.5	11.0	11.7	.8	

Table 10.--Area of timberland by forest-type group and dry ton stand-volume class, Kentucky, 1988

(In thousands of acres)

Forest-type group	Stand-volume class (dry tons per acre)									All classes	SE
	0-24	25-49	50-74	75-99	100-124	125-149	150-174	175-199	200+		
White/red pine	16.3	13.3	.4	6.5	.0	.0	.0	.0	.0	36.6	38.5
Loblolly/shortleaf	168.5	368.4	108.7	.0	.0	.0	.0	.0	.0	645.5	10.4
Oak/pine	105.7	441.3	266.9	43.9	.0	.0	.0	.0	.0	857.9	8.7
Oak/hickory	1,058.0	3,167.9	3,845.2	1,243.7	183.7	7.4	9.8	.0	.0	9,515.8	1.4
Oak/gum/cypress	5.5	27.3	13.2	12.8	.0	.0	.0	.0	.0	58.8	34.1
Elm/ash/red maple	55.7	217.2	189.5	63.5	36.9	8.5	.0	.0	.0	571.3	10.8
Northern hardwoods	77.0	220.3	229.0	105.3	29.7	.0	.0	.0	.0	661.4	10.2
All groups	1,486.7	4,455.7	4,653.0	1,475.8	250.4	16.0	9.8	.0	.0	12,347.4	.8
SE	6.8	3.2	3.1	6.4	16.1	70.9	100.0	.0	.0	.8	

Table 11.--Area of timberland by forest-type group and stocking class of all live trees, Kentucky, 1975

(In thousands of acres)

Forest-type group	*Stocking class*					*All classes*
	Nonstocked	*Poorly stocked*	*Moderately stocked*	*Fully stocked*	*Over-stocked*	
White/red pine	*.0*	*.0*	*.0*	*14.3*	*.0*	*14.3*
Loblolly/shortleaf	*.0*	*8.1*	*99.6*	*323.6*	*248.1*	*679.4*
Oak/pine	*.0*	*12.2*	*119.5*	*432.7*	*235.6*	*800.1*
Oak/hickory	*.0*	*171.5*	*1,337.0*	*5,741.3*	*1,919.5*	*9,169.4*
Oak/gum/cypress	*.0*	*.0*	*6.7*	*43.6*	*31.7*	*82.0*
Elm/ash/red maple	*14.6*	*45.0*	*212.6*	*242.9*	*127.5*	*642.7*
Northern hardwoods	*.0*	*.0*	*107.4*	*323.4*	*83.3*	*514.1*
All groups	*14.6*	*236.8*	*1,882.9*	*7,121.8*	*2,645.7*	*11,901.9*

Table 12.--Area of timberland by forest-type group and stocking class of all live trees, Kentucky, 1988

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	.0	3.2	9.9	10.0	13.5	36.6	38.5
Loblolly/shortleaf	.0	51.5	136.7	302.1	155.2	645.5	10.4
Oak/pine	.0	26.9	229.5	385.5	216.0	857.9	8.7
Oak/hickory	.0	357.5	2,534.1	4,252.2	2,372.1	9,515.8	1.4
Oak/gum/cypress	.0	.0	25.1	27.6	6.1	58.8	34.1
Elm/ash/red maple	.0	45.2	161.1	209.2	155.8	571.3	10.8
Northern hardwoods	.0	42.1	197.8	237.8	183.8	661.4	10.2
All groups	.0	526.4	3,294.2	5,424.2	3,102.5	12,347.4	.8
SE	.0	12.1	4.0	2.8	4.2	.8	

Table 13.--Area of timberland by forest-type group and stocking class of growing-stock trees, Kentucky, 1975

(In thousands of acres)

Forest-type group	*Stocking class*					*All classes*
	Nonstocked	*Poorly stocked*	*Moderately stocked*	*Fully stocked*	*Over-stocked*	
White/red pine	*.0*	*.0*	*.0*	*14.3*	*.0*	*14.3*
Loblolly/shortleaf	*.0*	*14.9*	*252.7*	*266.3*	*145.4*	*679.4*
Oak/pine	*.0*	*39.2*	*323.2*	*305.1*	*132.6*	*800.1*
Oak/hickory	*21.8*	*527.2*	*3,822.1*	*4,279.9*	*518.4*	*9,169.4*
Oak/gum/cypress	*.0*	*.0*	*6.7*	*56.2*	*19.0*	*82.0*
Elm/ash/red maple	*14.6*	*88.8*	*278.0*	*228.5*	*32.8*	*642.7*
Northern hardwoods	*.0*	*24.1*	*325.1*	*150.1*	*14.9*	*514.1*
All groups	*36.4*	*694.2*	*5,007.9*	*5,300.3*	*863.1*	*11,901.9*

Table 14.--Area of timberland by forest-type group and stocking class of growing-stock trees, Kentucky, 1988

(In thousands of acres)

Forest-type group	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
White/red pine	.0	5.3	11.2	6.6	13.5	36.6	38.5
Loblolly/shortleaf	.0	75.0	186.5	253.5	130.6	645.5	10.4
Oak/pine	.0	55.7	345.9	290.0	166.3	857.9	8.7
Oak/hickory	.0	684.4	3,311.6	3,888.3	1,631.5	9,515.8	1.4
Oak/gum/cypress	.0	5.5	19.6	27.6	6.1	58.8	34.1
Elm/ash/red maple	.0	73.4	187.8	206.3	103.7	571.3	10.8
Northern hardwoods	.0	63.8	268.8	228.2	100.7	661.4	10.2
All groups	.0	963.2	4,331.3	4,900.5	2,152.3	12,347.4	.8
SE	.0	8.7	3.4	3.0	5.3	.8	

Area of timberland by forest-type group, Kentucky, 1975 and 1988

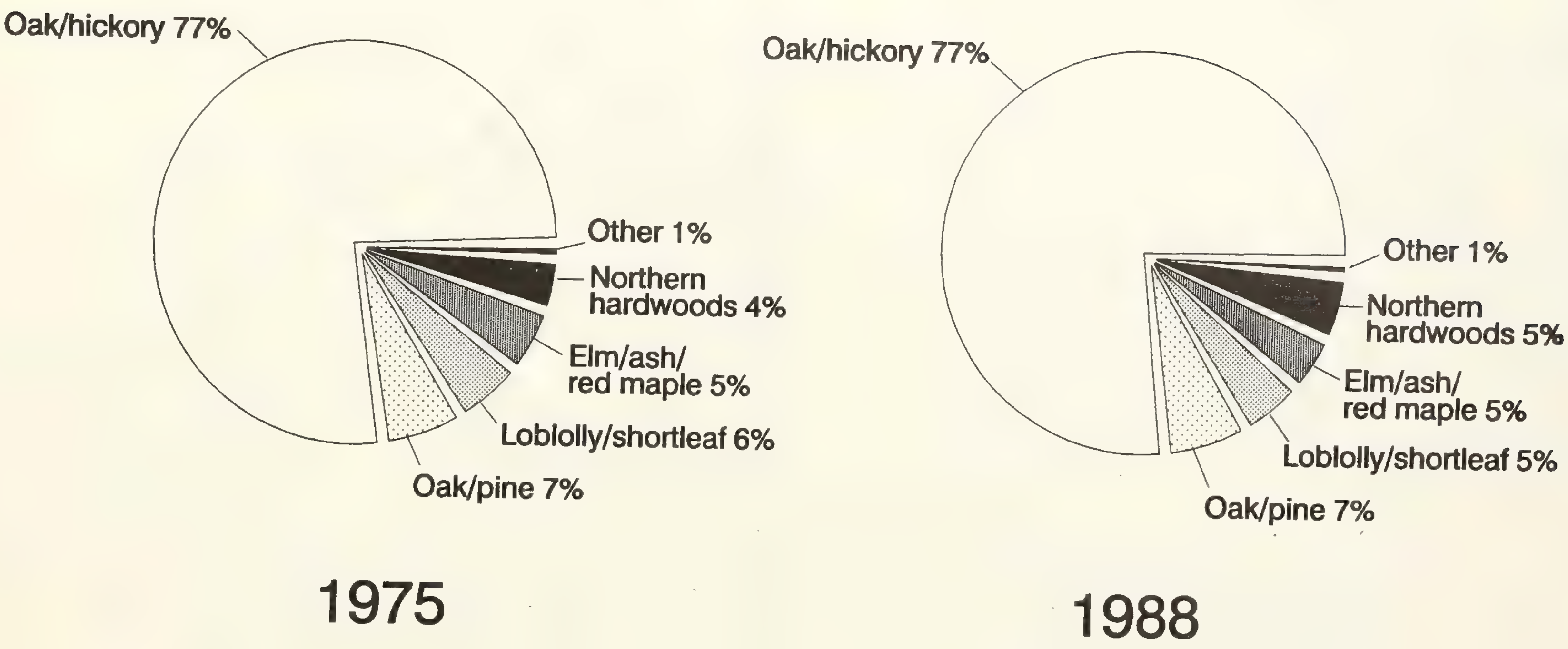


Table 15.--Area of timberland by forest-type group and basal-area class (all live trees), Kentucky, 1988

(In thousands of acres)

Forest-type group	Basal area class (square feet per acre)						All classes
	0-49	50-99	100-149	150-199	200-249	250+	
White/red pine	9.7	13.4	7.0	6.5	.0	.0	36.6
Loblolly/shortleaf	117.9	315.2	170.3	42.1	.0	.0	645.5
Oak/pine	109.1	386.8	344.1	18.0	.0	.0	857.9
Oak/hickory	1,106.6	4,724.8	3,407.8	270.2	6.5	.0	9,515.8
Oak/gum/cypress	5.5	40.5	12.8	.0	.0	.0	58.8
Elm/ash/red maple	61.9	295.3	164.6	41.0	8.5	.0	571.3
Northern hardwoods	70.1	380.6	177.4	30.7	2.6	.0	661.4
All groups	1,480.9	6,156.6	4,283.9	408.5	17.6	.0	12,347.4
SE	6.7	2.4	3.2	13.0	62.7	.0	.8

Table 16.--Number of live trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9
Eastern redcedar	238,472	93,680	37,711	17,733	6,623	2,887	1,055
Hard pines	56,442	46,832	33,122	29,843	19,287	10,775	5,176
Other softwoods	28,630	12,932	2,806	1,804	1,184	730	396
Total softwoods	323,545	153,444	73,640	49,380	27,094	14,392	6,627
Red maple	534,243	94,513	45,657	20,249	10,549	4,964	3,103
Sugar maple	381,704	83,529	38,293	21,013	12,802	7,214	4,959
Hickory	198,215	71,237	65,033	44,911	30,116	19,801	10,541
Beech	127,006	18,789	10,767	6,607	4,425	4,084	3,781
Ash	162,770	65,255	24,279	15,823	8,293	5,583	3,446
Black walnut	4,607	12,230	8,750	6,283	4,877	2,176	1,257
Sweetgum	68,044	9,939	8,316	5,388	3,305	1,875	1,401
Yellow-poplar	124,221	49,306	34,266	25,780	19,952	14,119	10,750
Blackgum	231,783	56,717	15,446	7,370	3,481	2,343	1,933
Select white oaks	98,616	51,556	45,294	34,273	24,442	20,989	13,260
Select red oaks	48,313	13,645	8,947	8,382	6,482	5,528	4,500
Other white oaks	94,502	35,038	24,206	23,321	18,772	13,839	9,581
Other red oaks	83,857	26,094	28,523	23,557	19,649	14,949	13,586
Basswood	13,339	11,323	4,203	2,711	1,922	1,580	832
Other commercial hardwoods	1,145,333	351,215	133,653	59,610	29,411	16,320	9,175
Noncommercial hardwoods	542,353	142,977	31,286	10,127	3,403	1,076	582
Total hardwoods	3,858,904	1,093,363	526,920	315,406	201,884	136,439	92,688
All species	4,182,449	1,246,807	600,560	364,786	228,978	150,831	99,316
SE	2.7	3.9	2.0	2.0	1.9	1.9	2.0

Table 16.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	361	299	74	87	3	398,988	9.6
Hard pines	2,213	975	240	150	0	205,056	9.5
Other softwoods	360	114	83	195	16	49,251	29.8
Total softwoods	2,935	1,389	397	432	19	653,295	6.9
Red maple	2,037	1,017	745	796	103	717,977	7.0
Sugar maple	2,650	1,758	942	967	85	555,917	6.3
Hickory	5,243	2,873	1,185	938	63	450,156	5.5
Beech	2,370	2,213	1,851	3,347	797	186,037	10.1
Ash	1,591	983	475	557	40	289,096	10.3
Black walnut	713	353	142	136	0	41,525	18.1
Sweetgum	654	328	230	181	4	99,665	14.5
Yellow-poplar	7,905	4,306	2,219	1,807	114	294,746	7.2
Blackgum	714	627	290	232	9	320,946	8.6
Select white oaks	8,749	6,135	2,716	2,683	291	309,005	6.0
Select red oaks	3,245	2,165	1,430	2,315	308	105,260	12.3
Other white oaks	6,811	3,682	1,912	2,641	308	234,614	7.9
Other red oaks	9,395	6,197	3,351	3,503	368	233,029	6.5
Basswood	610	287	187	215	9	37,219	20.0
Other commercial hardwoods	5,566	2,937	1,374	2,021	375	1,756,990	4.0
Noncommercial hardwoods	143	58	72	56	0	732,132	5.8
Total hardwoods	58,399	35,920	19,122	22,393	2,876	6,364,314	2.0
All species	61,333	37,309	19,519	22,825	2,896	7,017,609	2.0
SE	2.3	2.8	3.4	3.5	7.1	2.0	

Table 17.--Number of all live trees on timberland by diameter class, tree class, and species group, Kentucky, 1988

(In thousands of trees)

Diameter class	Growing stock		Cull		All classes	SE
	Soft-woods	Hard-woods	Soft-woods	Hard-woods		
Seedlings	907,762	39,238,676	-	6,437,288	46,583,726	1.8
1.0 - 2.9	323,545	3,316,551	-	542,353	4,182,449	2.7
3.0 - 4.9	153,444	950,387	-	142,977	1,246,807	3.9
Total saplings	476,989	4,266,938	-	685,329	5,429,256	2.5
5.0 - 6.9	72,024	464,459	1,616	62,461	600,560	2.0
7.0 - 8.9	48,414	290,095	966	25,311	364,786	2.0
9.0 - 10.9	-	189,930	-	11,954	201,884	2.0
Total poletimber	120,438	944,483	2,582	99,726	1,167,230	1.5
9.0 - 10.9	25,459	-	1,634	-	27,094	7.4
11.0 - 12.9	13,779	125,584	613	10,855	150,831	1.9
13.0 - 14.9	6,319	86,357	308	6,331	99,316	2.0
Total small sawtimber	45,558	211,941	2,555	17,186	277,241	1.7
15.0 - 16.9	2,766	54,895	168	3,504	61,333	2.3
17.0 - 18.9	1,249	33,391	140	2,529	37,309	2.8
19.0 - 20.9	369	17,622	29	1,500	19,519	3.4
21.0 - 28.9	402	19,332	30	3,061	22,825	3.5
29.0 and larger	16	1,961	3	916	2,896	7.1
Total large sawtimber	4,802	127,200	370	11,510	143,883	2.0
All classes	1,555,548	44,789,238	5,508	7,251,040	53,601,335	1.6
SE	6.9	1.7	14.3	3.5	1.6	

Table 18.--Number of trees (5.0+ inches d.b.h.) on timberland by species and tree class, Kentucky, 1988

(In thousands of trees)

Species	Tree class								All classes	SE
	Preferred	Acceptable	All growing stock	Rough cull	Rotten cull	All live	Salvable dead	Nonsalvable dead		
Eastern redcedar	1,627	61,317	62,944	3,116	775	66,835	4,014	1,840	72,689	8.3
Hard pines	2,762	97,454	100,217	1,144	422	101,782	4,633	7,184	113,599	7.8
Other softwoods	1,185	6,452	7,637	49	3	7,689	215	91	7,995	16.4
Total softwoods	5,575	165,223	170,798	4,309	1,199	176,306	8,861	9,115	194,282	5.5
Red maple	36	82,643	82,679	2,597	3,945	89,221	1,476	2,046	92,743	5.6
Sugar maple	148	85,258	85,406	2,136	3,142	90,685	528	1,533	92,746	5.7
Hickory	1,796	174,424	176,219	1,578	2,908	180,705	6,026	5,097	191,827	3.3
Beech	14	33,628	33,642	1,337	5,262	40,241	405	1,245	41,892	6.6
Ash	830	57,957	58,787	1,611	673	61,071	1,724	1,669	64,464	5.8
Black walnut	265	23,113	23,378	707	603	24,688	1,690	1,216	27,594	8.9
Sweetgum	387	20,769	21,155	365	161	21,682	312	443	22,437	12.7
Yellow-poplar	4,504	114,031	118,535	851	1,832	121,219	2,140	3,435	126,794	4.5
Blackgum	120	30,497	30,617	1,048	780	32,445	385	869	33,700	6.5
Select white oaks	3,234	151,506	154,740	2,478	1,616	158,833	3,919	4,621	167,373	3.8
Select red oaks	1,478	40,272	41,750	527	1,026	43,303	1,598	1,980	46,881	5.5
Other white oaks	1,820	99,036	100,856	2,392	1,826	105,074	2,300	5,091	112,465	4.8
Other red oaks	2,679	116,325	119,003	1,529	2,547	123,079	8,954	8,827	140,860	4.0
Basswood	245	10,793	11,039	724	794	12,557	478	267	13,302	14.2
Other commercial hardwoods	1,213	224,604	225,817	14,995	19,630	260,441	14,906	27,769	303,117	3.8
Noncommercial hardwoods	-	-	-	39,873	6,930	46,802	5,910	18,940	71,652	4.7
Total hardwoods	18,767	1,264,857	1,283,624	74,748	53,674	1,412,047	52,751	85,051	1,549,850	1.3
All species	24,342	1,430,080	1,454,422	79,057	54,873	1,588,353	61,613	94,166	1,744,132	1.2
SE	4.6	1.3	1.3	4.0	4.7	1.2	5.1	4.0	1.2	

Table 19.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9
Eastern redcedar	238,472	93,680	36,552	17,136	5,313	2,508	936
Hard pines	56,442	46,832	32,666	29,474	18,982	10,574	4,987
Other softwoods	28,630	12,932	2,806	1,804	1,164	698	396
Total softwoods	323,545	153,444	72,024	48,414	25,459	13,779	6,319
Red maple	534,243	94,513	43,105	18,926	9,968	4,443	2,537
Sugar maple	381,704	83,529	36,495	20,258	12,254	6,443	4,529
Hickory	198,215	71,237	63,493	43,900	29,534	19,351	10,131
Beech	127,006	18,789	9,774	5,779	3,915	3,295	3,139
Ash	162,770	65,255	23,615	15,264	8,126	5,223	3,189
Black walnut	4,607	12,230	8,718	5,968	4,561	1,927	1,079
Sweetgum	68,044	9,939	8,080	5,333	3,305	1,712	1,357
Yellow-poplar	124,221	49,306	33,413	25,133	19,742	13,631	10,632
Blackgum	231,783	56,717	14,572	7,123	3,361	2,097	1,783
Select white oaks	98,616	51,556	44,037	33,685	24,198	19,911	12,889
Select red oaks	48,313	13,645	8,504	8,042	6,249	5,437	4,341
Other white oaks	94,502	35,038	23,399	22,919	18,014	12,963	9,111
Other red oaks	83,857	26,094	27,562	23,205	19,133	14,151	13,069
Basswood	13,339	11,323	3,548	2,426	1,671	1,422	817
Other hardwoods	1,145,333	351,215	116,143	52,133	25,897	13,577	7,754
Total hardwoods	3,316,551	950,387	464,459	290,095	189,930	125,584	86,357
All species	3,640,095	1,103,831	536,482	338,509	215,389	139,364	92,676
SE	2.9	4.1	2.1	2.0	2.0	1.9	2.1

Table 19.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	193	197	53	56	0	395,097	9.7
Hard pines	2,213	938	233	150	0	203,490	9.5
Other softwoods	360	114	83	195	16	49,199	29.8
Total softwoods	2,766	1,249	369	402	16	647,787	7.0
Red maple	1,629	751	613	629	76	711,435	7.0
Sugar maple	2,372	1,462	896	639	59	550,639	6.3
Hickory	5,032	2,702	1,152	865	59	445,671	5.5
Beech	1,879	1,735	1,500	2,258	368	179,438	10.4
Ash	1,516	900	432	507	15	286,812	10.3
Black walnut	639	318	93	75	0	40,215	18.5
Sweetgum	634	328	230	176	0	99,138	14.6
Yellow-poplar	7,791	4,181	2,177	1,734	101	292,063	7.3
Blackgum	651	563	253	204	9	319,118	8.7
Select white oaks	8,581	6,081	2,631	2,465	261	304,911	6.0
Select red oaks	3,220	2,131	1,390	2,199	235	103,707	12.4
Other white oaks	6,529	3,528	1,755	2,422	216	230,396	8.0
Other red oaks	9,126	5,969	3,187	3,302	299	228,954	6.6
Basswood	564	244	149	191	7	35,701	20.7
Other hardwoods	4,731	2,497	1,163	1,666	255	1,722,365	4.0
Total hardwoods	54,895	33,391	17,622	19,332	1,961	5,550,562	2.2
All species	57,661	34,640	17,991	19,734	1,977	6,198,349	2.1
SE	2.4	2.9	3.6	3.8	8.6	2.1	

Table 20.--Number of standing dead trees (5.0+ inches d.b.h.) on timberland by species, condition class, and diameter class, Kentucky, 1988

(In thousands of trees)

Species	Intact top				Broken top				All trees	SE
	Diameter group (inches at breast height)				Diameter group (inches at breast height)					
	5.0-10.9	11.0-14.9	15+	Total	5.0-10.9	11.0-14.9	15+	Total		
Eastern redcedar	1,728	46	0	1,775	264	15	0	279	2,053	32.5
Hard pines	1,615	124	38	1,778	273	15	0	287	2,066	23.6
Other softwoods	0	0	0	0	91	0	0	91	91	100.0
Total softwoods	3,344	171	38	3,553	627	30	0	657	4,210	19.6
Red maple	185	0	0	185	371	36	0	407	592	37.7
Sugar maple	314	11	0	325	78	0	37	115	440	59.0
Hickory	2,008	509	130	2,647	431	17	9	457	3,104	17.5
Beech	126	61	69	256	0	81	0	81	337	34.4
Ash	507	59	8	574	405	76	39	521	1,095	40.4
Black walnut	606	15	0	621	198	0	31	229	850	39.0
Sweetgum	83	0	26	109	0	0	11	11	120	73.3
Yellow-poplar	818	13	0	831	153	0	0	153	984	30.0
Blackgum	197	15	13	226	92	52	0	144	369	32.2
Select white oaks	1,018	191	209	1,419	322	16	0	338	1,756	17.4
Select red oaks	210	161	132	503	422	36	27	485	988	35.0
Other white oaks	510	95	92	697	175	17	84	277	974	19.9
Other red oaks	3,247	258	409	3,914	522	154	52	728	4,642	15.6
Basswood	26	0	34	60	0	0	0	0	60	71.3
Other commercial hardwoods	5,023	378	161	5,563	1,577	212	78	1,868	7,431	18.0
Noncommercial hardwoods	2,198	298	108	2,603	956	173	124	1,253	3,856	20.5
Total hardwoods	17,076	2,064	1,391	20,532	5,701	871	493	7,065	27,597	7.9
All species	20,420	2,235	1,430	24,084	6,329	901	493	7,723	31,807	7.3
SE	9.9	12.8	13.0	8.6	14.4	21.2	22.7	12.5	7.3	

Table 21.--Number of seedlings, saplings, and shrubs on timberland by species and stand-size class, Kentucky, 1988

(In millions of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Eastern redcedar	321	302	261	0	884	9.7
Shortleaf pine	18	11	29	0	58	33.3
Red pine	0	0	1	0	1	100.0
Pitch pine	21	15	37	0	74	34.7
Eastern white pine	15	3	16	0	34	43.9
Loblolly pine	3	3	3	0	9	46.8
Virginia pine	81	57	68	0	206	15.6
Eastern hemlock	88	20	9	0	117	25.0
Boxelder	89	86	81	0	257	17.1
Black maple	2	0	0	0	2	100.0
Striped maple	26	5	0	0	31	44.1
Red maple	4,356	1,680	886	0	6,923	4.1
Silver maple	85	1	4	0	90	50.3
Sugar maple	2,557	793	361	0	3,711	5.2
Mountain maple	28	4	0	0	32	43.4
Buckeye species	25	33	9	0	67	26.9
Ohio buckeye	36	11	7	0	54	24.6
Yellow buckeye	23	1	0	0	24	30.4
Ailanthus species	10	0	0	0	10	66.1
Alder species	40	45	3	0	89	37.2
Hercules club	70	23	16	0	109	21.3
Serviceberry	349	115	62	0	525	11.3
Azalea species	221	49	14	0	284	19.9
Common pawpaw	434	106	62	0	602	15.2
Barberry	0	7	0	0	7	55.7
Yellow birch	5	0	23	0	28	65.2
Sweet birch	86	33	57	0	176	19.6
River birch	22	63	19	0	104	37.0
American hornbeam	460	297	148	0	906	11.5
Hickory species	1,302	522	365	0	2,189	4.2
Bitternut hickory	7	4	3	0	14	35.5
Pecan	0	0	2	0	2	100.0
Shellbark hickory	1	0	0	0	1	100.0
Shagbark hickory	0	3	8	0	11	66.5
Mockernut hickory	14	0	3	0	17	69.1
American chestnut	52	8	11	0	71	33.3
Catalpa	7	0	5	0	12	53.7
Sugarberry	10	3	0	0	14	59.1
Hackberry	215	133	86	0	435	13.6
Eastern redbud	548	354	255	0	1,157	7.3
Fringetree	7	0	0	0	7	100.0
Flowering dogwood	3,578	1,744	946	0	6,268	4.3
Alternate-leaved dogwood	4	13	5	0	22	50.7
Round-leaved dogwood	1	9	0	0	11	84.2
Panicled dogwood	20	1	23	0	45	56.3
Red-osier dogwood	0	26	4	0	31	86.8
Hawthorn species	35	23	58	0	117	20.3
American hazelnut	87	214	86	0	386	19.7
Beaked hazelnut	5	12	0	0	17	69.5
Common persimmon	66	43	62	0	171	17.0
American beech	1,225	324	159	0	1,708	8.0
White ash	1,115	595	442	0	2,151	6.7
Black ash	3	0	3	0	5	70.7
Green ash	184	126	104	0	414	15.4
Blue ash	14	9	21	0	44	50.5
Huckleberry	57	6	0	0	63	52.1
Honeylocust	16	15	27	0	59	21.3
Kentucky coffeetree	0	2	0	0	2	100.0
Witch-hazel	209	93	14	0	317	16.6

Table 21.-continued

(In millions of stems)

Species	Stand-size class				All classes	SE
	Sawtimber	Poletimber	Sapling and seedling	Nonstocked		
American holly	55	22	5	0	82	28.6
Large-leaved holly	1	0	0	0	1	100.0
Winterberry holly	0	1	0	0	1	100.0
Butternut	7	3	0	0	9	42.0
Black walnut	38	11	21	0	71	31.9
Sheep laurel	1	0	0	0	1	100.0
Mountain laurel	734	381	255	0	1,371	13.2
Labrador tea	1	0	0	0	1	100.0
Common spicebush	1,209	667	322	0	2,199	9.7
Sweetgum	127	107	112	0	346	13.6
Yellow-poplar	618	233	262	0	1,113	8.0
Bush honeysuckle	1,630	758	735	0	3,122	10.2
Osage-orange	3	8	14	0	25	43.9
Magnolia	170	33	2	0	204	22.7
Cucumbertree	210	54	12	0	277	15.7
Sweetbay	0	18	0	0	18	100.0
Apple species	5	1	7	0	13	47.3
Mulberry species	51	14	23	0	88	21.9
White mulberry	0	0	1	0	1	100.0
Red mulberry	37	18	6	0	61	24.1
Mountain holly	2	0	0	0	2	100.0
Black tupelo	1,730	791	392	0	2,913	4.9
Eastern hophornbeam	637	246	152	0	1,035	10.0
Sourwood	711	303	204	0	1,218	8.2
Paulownia	6	0	0	0	6	100.0
Ninebark	13	0	0	0	13	100.0
American sycamore	28	27	4	0	59	21.9
Eastern cottonwood	5	0	0	0	5	62.8
Bigtooth aspen	8	0	3	0	12	51.2
Quaking aspen	0	2	0	0	2	100.0
Pin cherry	49	11	18	0	79	22.9
Black cherry	520	210	208	0	938	7.3
Chokecherry	32	41	35	0	108	23.5
White oak	599	304	122	0	1,024	7.3
Swamp white oak	0	0	4	0	4	76.3
Scarlet oak	133	74	56	0	263	14.6
Northern pin oak	4	0	0	0	4	100.0
Southern red oak	127	53	49	0	229	19.7
Swamp red oak	9	8	11	0	28	33.9
Scrub, bear oak	2	0	0	0	2	100.0
Shingle oak	21	27	20	0	67	22.6
Overcup oak	1	0	0	0	1	100.0
Bur oak	1	0	0	0	1	100.0
Blackjack oak	77	31	26	0	135	22.7
Swamp chestnut oak	20	3	0	0	23	58.2
Chinkapin oak	157	146	117	0	421	12.4
Pin oak	12	4	0	0	16	35.9
Willow oak	23	7	0	0	31	69.8
Chestnut oak	610	165	90	0	865	10.3
Northern red oak	457	179	106	0	742	7.3
Shumard oak	0	1	0	0	1	100.0
Post oak	30	53	46	0	130	18.6
Black oak	528	288	168	0	984	6.1
Buckthorn species	22	14	7	0	43	26.2
Rhododendron species	229	20	96	0	345	25.7
Smooth sumac	106	56	299	0	461	22.8
Staghorn sumac	50	38	37	0	124	24.4
Currant species	3	21	4	0	28	59.3
Black locust	161	42	117	0	320	13.6

Table 21.-continued

(In millions of stems)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Rose species	362	293	240	0	895	14.6
Rubus species	3,175	2,204	3,765	0	9,145	7.6
Black willow	36	5	58	0	99	40.3
American elderberry	21	8	20	0	49	44.5
Red-berried alder	1	0	0	0	1	100.0
Sassafras	2,261	797	631	0	3,689	5.3
American mountain ash	1	1	2	0	5	61.9
European mountain ash	1	0	0	0	1	100.0
Spirea species	1	3	0	0	4	77.7
American basswood	126	9	12	0	147	29.7
Elm species	629	209	181	0	1,020	9.6
Winged elm	317	176	283	0	775	11.9
American elm	135	180	158	0	472	15.1
Slippery elm	480	278	185	0	943	11.4
Rock elm	43	40	126	0	210	41.4
American bladdernut	6	7	19	0	32	63.7
Blueberry	2,563	1,004	553	0	4,120	8.9
Viburnum species	114	32	50	0	196	34.6
Maple-leaved viburnum	565	125	39	0	730	15.3
Hobblebush viburnum	0	2	0	0	2	100.0
Arrowwood	1	0	0	0	1	100.0
Blackhaw	34	13	7	0	54	34.2
Highbush cranberry	1	1	0	0	3	71.5
Unknown deciduous shrub	2,783	2,237	1,887	0	6,907	7.2
Unknown evergreen shrub	71	22	12	0	105	41.8
Unknown tree	492	223	172	0	888	9.1
All species	44,501	21,411	17,444	0	83,356	1.7
SE	2.8	4.9	6.8	.0	1.7	

Table 22.--Net dry weight of all live trees on timberland by species and diameter class, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Eastern redcedar	3,439	2,598	2,432	1,558	1,053	554	258	264	91	157	12,405	7.6
Hard pines	1,702	2,311	4,071	4,392	3,730	2,544	1,443	844	289	214	21,540	7.4
Other softwoods	402	180	237	246	247	189	255	99	96	394	2,347	16.3
Total softwoods	5,544	5,089	6,740	6,196	5,030	3,288	1,956	1,207	477	765	36,292	5.1
Red maple	5,737	3,813	3,380	2,979	2,145	1,914	1,671	1,035	1,033	2,054	25,764	5.1
Sugar maple	5,913	4,845	5,301	5,345	4,433	4,275	3,050	2,437	1,735	2,661	39,995	5.2
Hickory	3,828	6,714	9,577	11,515	12,290	9,704	6,852	4,962	2,753	3,801	71,997	3.1
Beech	1,866	1,231	1,513	1,716	2,327	2,906	2,427	2,763	2,911	9,721	29,381	7.0
Ash	3,609	2,647	3,349	2,892	2,834	2,491	1,477	1,182	707	1,266	22,455	5.1
Black walnut	460	748	1,109	1,402	963	818	561	401	172	250	6,885	8.3
Sweetgum	699	782	1,047	1,106	924	1,037	651	454	413	465	7,579	11.4
Yellow-poplar	1,743	2,341	3,641	4,986	5,548	6,285	6,376	4,623	3,117	4,232	42,891	4.3
Blackgum	3,043	1,406	1,373	1,171	1,170	1,357	706	775	460	545	12,006	6.2
Select white oaks	1,745	3,524	5,839	7,688	10,751	10,254	9,727	9,293	5,517	10,925	75,262	3.7
Select red oaks	763	818	1,714	2,381	3,322	4,024	4,181	3,760	3,252	10,473	34,689	5.2
Other white oaks	1,690	2,315	4,649	6,508	7,711	7,741	7,711	5,578	3,795	9,977	57,676	4.7
Other red oaks	1,293	2,715	4,620	6,590	7,915	10,298	9,953	8,659	6,021	12,012	70,077	3.6
Basswood	335	333	441	541	738	617	602	366	309	630	4,914	11.1
Other commercial hardwoods	17,300	11,317	10,190	8,824	7,697	6,369	5,311	3,674	2,222	7,007	79,911	4.0
Noncommercial hardwoods	7,446	2,342	1,504	919	463	397	127	79	116	148	13,539	6.2
Total hardwoods	57,470	47,892	59,248	66,564	71,231	70,489	61,383	50,042	34,534	76,169	595,022	1.2
All species	63,014	52,981	65,988	72,761	76,262	73,777	63,338	51,249	35,011	76,933	631,314	1.1
SE	3.2	2.0	1.9	1.9	1.9	2.1	2.4	2.9	3.5	3.8	1.1	

Table 23.--Net dry weight[a] of all trees on timberland by class of material and species group, Kentucky, 1988

(In thousands of tons)

Class of material	Species group		All groups	SE
	Softwoods	Hardwoods		
Sawtimber trees:				
Sawlog portion	11,824	211,951	223,775	1.7
Upper stem	1,664	47,022	48,686	1.6
Total sawtimber trees	13,488	258,973	272,461	1.6
Poletimber trees	7,840	114,968	122,808	1.5
All growing stock	21,328	373,941	395,269	1.4
Rough cull trees[b]	851	14,294	15,145	4.4
Rotten cull trees[b]	71	10,697	10,768	4.4
Salvable dead trees[c]	782	9,114	9,896	5.3
Saplings[c]	5,544	57,470	63,014	3.2
Tops - growing stock	8,180	130,017	138,197	1.2
Tops - rough and rotten	318	8,602	8,920	3.1
All nongrowing stock	15,746	230,195	245,941	1.2
All classes	37,074	604,136	641,210	1.1
SE	5.1	1.2	1.1	

[a] Includes bark and sound cull; excludes rotten cull.

[b] Bole portion of trees 5.0 inches d.b.h. and larger.

[c] Includes entire tree aboveground.

Table 24.--Net volume of all trees on timberland by class of timber and species group, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	539.8	133.1	2,348.1	5,699.1	8,720.2	1.6
Upper stem	77.6	18.2	539.1	1,282.9	1,917.8	1.6
Total sawtimber trees	617.4	151.3	2,887.2	6,982.1	10,638.0	1.6
Poletimber trees	283.3	165.6	1,795.2	3,087.9	5,331.9	1.6
Total growing-stock trees	900.7	316.8	4,682.4	10,069.9	15,969.9	1.3
Rough trees:						
Sawtimber size	4.5	14.5	47.7	141.9	208.5	5.8
Poletimber size	1.5	1.3	41.5	116.8	161.0	5.3
Total rough trees	6.0	15.8	89.2	258.6	369.6	4.2
Rotten trees:						
Sawtimber size	.8	1.1	53.7	181.5	237.1	5.1
Poletimber size	.2	.4	11.1	19.3	31.0	7.7
Total rotten trees	1.0	1.5	64.8	200.8	268.1	4.7
Salvable dead[a] trees:						
Sawtimber size	8.8	2.7	15.0	85.8	112.2	7.8
Poletimber size	6.2	5.3	14.0	59.6	85.0	7.5
Total salvable dead trees	15.0	7.9	28.9	145.4	197.3	5.9
All classes	922.7	342.1	4,865.3	10,674.8	16,804.8	1.2
SE	7.6	7.8	3.0	1.6	1.2	

[a] Includes noncommercial species.

Table 25.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Kentucky, 1988

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
			All live		
			(In millions of cubic feet)		
Softwoods	141.0	31.6	11.7	1,057.5	1,241.8
Hardwoods	899.1	448.7	240.8	13,777.2	15,365.8
Total all live	1,040.1	480.3	252.4	14,834.7	16,607.6
			Growing stock		
			(In millions of cubic feet)		
Softwoods	140.2	31.0	11.6	1,034.8	1,217.5
Hardwoods	868.9	438.7	230.1	13,214.7	14,752.4
Total growing stock	1,009.0	469.7	241.7	14,249.5	15,969.9
			Sawtimber		
			(In millions of board feet)[a]		
Softwoods	418.8	93.5	30.1	2,248.5	2,790.9
Hardwoods	2,759.0	1,387.7	632.8	38,238.2	43,017.7
Total sawtimber	3,177.9	1,481.1	662.8	40,486.7	45,808.6

[a] For all board-foot volume tables, International 1/4-inch rule is used.

Table 26.--Net volume of growing-stock trees on timberland by forest-type group and stand-size class, Kentucky, 1988

(In millions of cubic feet)

Forest-type group	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White/red pine	29.3	.0	5.4	.0	34.7	59.3
Loblolly/shortleaf	426.9	194.3	50.7	.0	671.9	11.9
Oak/pine	532.2	317.0	83.0	.0	932.2	10.0
Oak/hickory	9,322.2	2,633.5	667.5	.0	12,623.1	1.8
Oak/gum/cypress	62.0	5.0	8.6	.0	75.7	37.0
Elm/ash/red maple	518.9	200.5	44.5	.0	763.9	13.3
Northern hardwoods	635.3	184.6	48.4	.0	868.3	11.7
All groups	11,526.8	3,535.0	908.1	.0	15,969.9	1.3
SE	2.3	4.5	7.0	.0	1.3	

Table 27.--Net volume of growing-stock trees on timberland by forest-type group and basal-area class (all live trees), Kentucky, 1988

(In millions of cubic feet)

Forest-type group	Basal area class (square feet per acre)						All classes
	0-49	50-99	100-149	150-199	200-249	250+	
White/red pine	1.2	10.4	3.6	19.5	.0	.0	34.7
Loblolly/shortleaf	33.5	263.7	285.3	89.5	.0	.0	671.9
Oak/pine	34.9	340.5	508.2	48.7	.0	.0	932.2
Oak/hickory	388.0	5,379.6	6,210.5	635.3	9.8	.0	12,623.1
Oak/gum/cypress	3.3	43.9	28.5	.0	.0	.0	75.7
Elm/ash/red maple	16.6	296.9	308.3	104.9	37.2	.0	763.9
Northern hardwoods	27.5	425.2	335.7	76.5	3.5	.0	868.3
All groups	505.1	6,760.0	7,680.0	974.3	50.5	.0	15,969.9
SE	8.1	2.7	3.4	13.5	76.4	.0	1.3

Table 28.--Net volume of growing-stock trees on timberland by species and forest-type group, Kentucky, 1988

(In millions of cubic feet)

Species	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Eastern redcedar	.0	.0	64.1	88.6	79.2	.8	8.8	5.5	.0	247.1	8.7
Hard pines	.4	.0	437.7	258.0	175.9	.0	3.0	3.6	.0	878.6	7.7
Other softwoods	12.6	.0	1.8	14.2	53.6	.0	2.3	7.3	.0	91.9	16.7
Total softwoods	13.0	.0	503.6	360.8	308.7	.8	14.2	16.4	.0	1,217.5	5.9
Red maple	1.3	.0	7.0	22.8	529.5	1.8	36.5	23.3	.0	622.3	6.0
Sugar maple	1.1	.0	1.8	20.4	510.0	2.1	17.7	254.5	.0	807.6	6.0
Hickory	2.0	.0	14.6	93.6	1,546.6	2.8	24.5	79.2	.0	1,763.3	3.2
Beech	2.1	.0	.6	3.2	560.0	.2	1.9	106.6	.0	674.6	7.9
Ash	1.3	.0	5.1	26.5	389.2	.7	55.5	88.9	.0	567.1	5.7
Black walnut	.0	.0	1.5	8.8	138.5	.0	15.7	18.1	.0	182.7	8.5
Sweetgum	.2	.0	2.8	10.3	171.4	4.0	23.4	2.8	.0	214.9	12.1
Yellow-poplar	8.4	.0	39.1	86.7	1,777.2	.0	8.9	52.8	.0	1,973.1	4.5
Blackgum	.0	.0	1.5	12.5	221.0	3.4	2.5	5.1	.0	246.0	7.0
Select white oaks	1.6	.0	27.9	87.0	1,827.1	1.8	11.7	19.2	.0	1,976.2	3.8
Select red oaks	.0	.0	5.2	29.5	685.3	28.6	5.6	25.4	.0	779.5	5.2
Other white oaks	.5	.0	12.4	36.2	1,221.4	.0	1.5	11.7	.0	1,283.7	4.8
Other red oaks	1.2	.0	26.9	81.6	1,780.1	17.1	8.2	11.4	.0	1,926.4	3.8
Basswood	.3	.0	.0	.0	91.5	.0	.6	32.1	.0	124.5	11.7
Other hardwoods	1.6	.0	22.0	52.5	865.6	12.4	535.6	121.0	.0	1,610.5	5.2
Total hardwoods	21.6	.0	168.3	571.4	12,314.4	74.8	749.8	851.9	.0	14,752.4	1.4
All species	34.7	.0	671.9	932.2	12,623.1	75.7	763.9	868.3	.0	15,969.9	1.3
[illegible]	[illegible]	.0	11.9	[illegible]	[illegible]	[illegible]	[illegible]	11.7	.0	[illegible]	

Table 29.--Net volume of growing-stock trees on timberland by species and stand-size class, Kentucky, 1975

(In millions of cubic feet)

Species	Stand-size class				All classes
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked	
Eastern redcedar	63.6	43.2	61.6	.0	168.5
Hard pines	531.0	198.7	133.1	.0	862.8
Other softwoods	48.6	7.3	1.1	.0	57.0
Total softwoods	643.2	249.3	195.8	.0	1,088.3
Red maple	259.0	103.1	32.1	.0	394.2
Sugar maple	403.1	112.2	57.7	.0	573.0
Hickory	982.4	466.5	209.0	.0	1,657.9
Beech	556.5	75.3	25.1	.0	657.0
Ash	261.7	118.2	76.0	.0	455.9
Black walnut	65.9	54.5	40.5	.0	160.9
Sweetgum	104.7	44.6	40.5	.0	189.8
Yellow-poplar	750.1	299.3	217.3	.0	1,266.7
Blackgum	139.4	45.4	26.5	.0	211.3
Select white oaks	1,084.9	467.7	183.7	.0	1,736.3
Select red oaks	472.1	148.7	81.1	.0	701.9
Other white oaks	741.0	307.2	111.4	.0	1,159.6
Other red oaks	1,171.7	487.4	175.4	.0	1,834.5
Basswood	82.0	19.4	6.6	.0	107.9
Other hardwoods	730.6	414.6	190.1	.0	1,335.3
Total hardwoods	7,805.1	3,164.2	1,472.8	.0	12,442.1
All species	8,448.2	3,413.5	1,668.6	.0	13,530.4

Table 30.--Net volume of growing-stock trees on timberland by species and stand-size class, Kentucky, 1988

(In millions of cubic feet)

Species	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Eastern redcedar	92.6	125.3	29.2	.0	247.1	[illegible]
Hard pines	587.8	236.6	54.3	.0	878.6	[illegible]
Other softwoods	78.0	11.3	2.6	.0	91.9	16.7
Total softwoods	758.3	373.2	86.0	.0	1,217.5	5.9
Red maple	458.8	143.4	20.0	.0	622.3	6.0
Sugar maple	631.2	144.2	32.3	.0	807.6	6.0
Hickory	1,198.4	450.7	114.2	.0	1,763.3	3.2
Beech	579.2	75.5	19.9	.0	674.6	7.9
Ash	364.9	163.8	38.3	.0	567.1	5.7
Black walnut	102.4	63.8	16.4	.0	182.7	8.5
Sweetgum	129.0	71.6	14.3	.0	214.9	12.1
Yellow-poplar	1,446.5	407.0	119.6	.0	1,973.1	4.5
Blackgum	181.0	56.2	8.7	.0	246.0	7.9
Select white oaks	1,446.4	409.9	119.9	.0	1,976.2	3.8
Select red oaks	605.4	136.9	37.2	.0	779.5	5.2
Other white oaks	997.3	225.0	61.4	.0	1,283.7	[illegible]
Other red oaks	1,473.3	348.9	104.3	.0	1,926.4	[illegible]
Basswood	102.1	19.1	3.3	.0	124.5	11.7
Other hardwoods	1,052.5	445.7	112.3	.0	1,610.5	5.2
Total hardwoods	10,768.5	3,161.8	822.1	.0	14,752.4	1.4
All species	11,526.8	3,535.0	908.1	.0	15,969.9	1.3
SE	2.3	4.5	7.0	.0	1.3	

Net volume of growing-stock trees by species, Kentucky, 1988

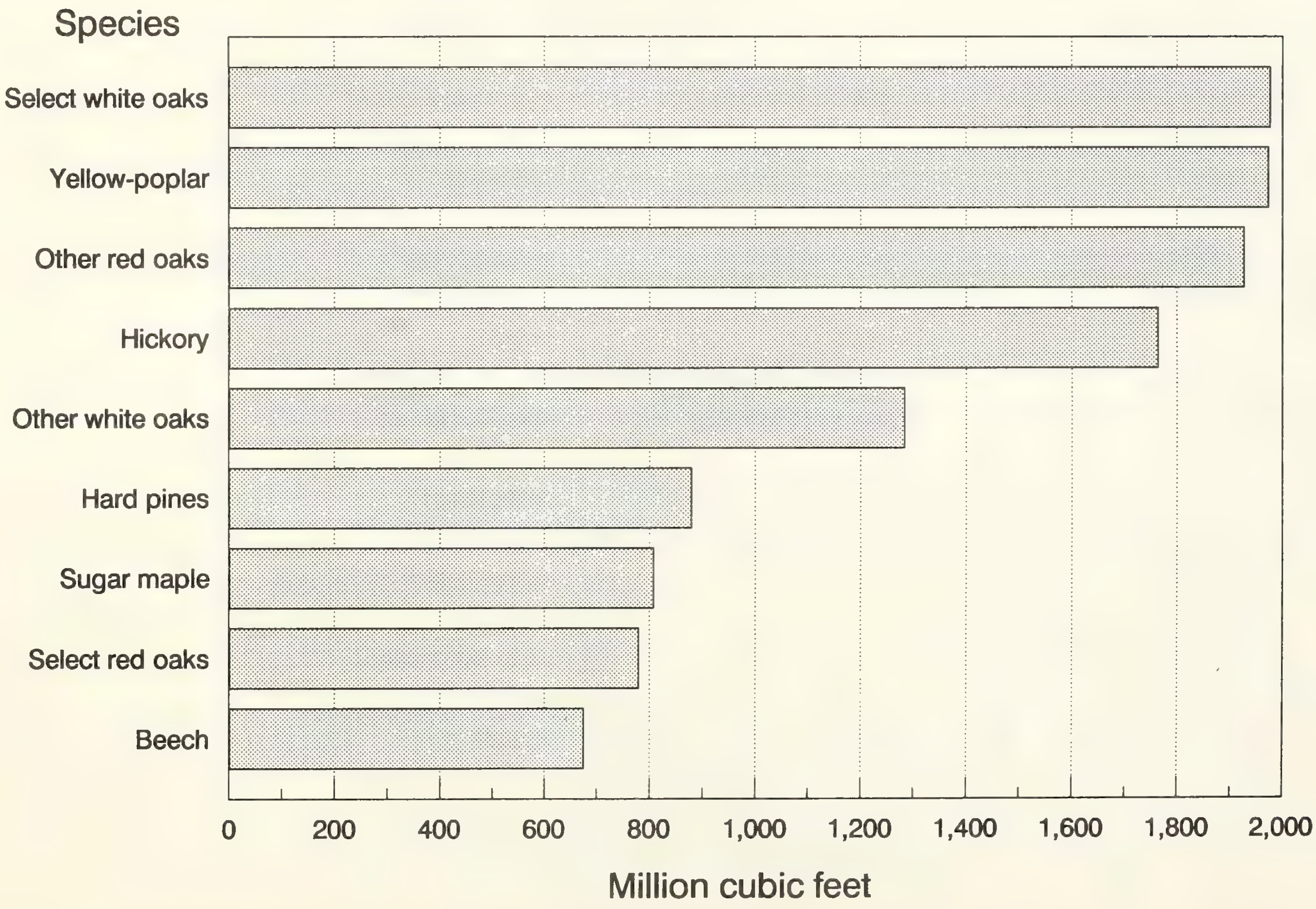


Table 31.--Net volume of growing-stock trees on timberland by species and cubic-foot stand-volume class, Kentucky, 1988

(In millions of cubic feet)

Species	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
Eastern redcedar	23.1	88.7	98.7	24.1	7.1	5.4	247.1	8.7
Hard pines	15.3	140.8	225.6	228.9	167.4	100.5	878.6	[illegible]
Other softwoods	1.4	8.1	12.1	25.1	26.0	19.1	91.9	16.7
Total softwoods	39.9	237.6	336.4	278.2	200.5	125.0	1,217.5	5.9
Red maple	7.4	61.7	141.5	170.3	160.2	81.1	622.3	6.0
Sugar maple	10.8	68.4	189.3	246.1	159.0	134.0	807.6	6.0
Hickory	39.6	242.9	545.3	469.3	342.3	124.0	1,763.3	3.2
Beech	2.8	45.5	156.5	208.5	132.2	129.2	674.6	7.9
Ash	21.5	82.1	175.4	130.1	70.8	87.3	567.1	5.7
Black walnut	15.6	55.6	60.5	24.3	13.3	13.5	182.7	8.5
Sweetgum	5.5	27.4	32.7	69.1	43.0	37.3	214.9	12.1
Yellow-poplar	32.2	223.4	384.9	476.6	498.9	357.2	1,973.1	4.5
Blackgum	5.0	25.6	66.5	74.6	51.0	23.3	246.0	7.0
Select white oaks	35.5	243.8	547.5	615.2	351.8	182.4	1,976.2	3.8
Select red oaks	13.3	80.7	207.5	213.2	170.1	94.8	779.5	5.2
Other white oaks	12.3	127.3	424.8	419.3	235.4	64.5	1,283.7	4.8
Other red oaks	34.6	233.1	483.3	609.1	377.1	189.2	1,926.4	3.8
Basswood	.1	9.0	25.9	52.2	28.0	9.2	124.5	11.7
Other hardwoods	78.8	224.2	387.8	379.1	254.5	286.1	1,610.5	5.2
Total hardwoods	314.9	1,750.6	3,829.3	4,156.9	2,887.6	1,813.0	14,752.4	1.4
All species	354.8	1,988.2	4,165.8	4,435.1	3,088.0	1,938.0	15,969.9	1.3
SE	8.0	4.6	3.9	4.6	6.4	9.8	1.3	

Table 32.--Net volume of growing-stock trees on timberland by species and diameter class, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	65.3	45.4	23.2	12.0	10.4	7.6	4.5	.0	.0	.0	168.5
Hard pines	120.1	187.0	226.7	179.7	86.4	46.3	12.7	4.0	.0	.0	862.8
Other softwoods	2.3	5.2	11.3	6.4	5.3	5.6	4.0	6.4	9.4	1.1	57.0
Total softwoods	187.7	237.5	261.2	198.1	102.1	59.5	21.2	10.4	9.4	1.1	1,088.3
Red maple	68.1	71.3	61.8	42.9	54.6	32.9	17.6	13.6	18.9	12.5	394.2
Sugar maple	74.9	106.8	97.5	78.2	65.4	64.9	43.5	15.5	26.3	.1	573.0
Hickory	211.8	249.0	343.1	249.5	232.4	140.9	103.7	51.5	68.3	7.6	1,657.9
Beech	19.3	41.1	49.4	63.6	71.2	77.8	70.6	61.9	162.1	40.0	657.0
Ash	44.4	78.4	90.4	78.9	54.9	43.9	25.4	16.2	21.5	1.9	455.9
Black walnut	23.2	28.8	28.3	30.9	25.2	15.3	2.9	2.4	3.8	.0	160.9
Sweetgum	15.5	27.0	40.6	42.8	28.5	15.3	6.3	6.4	7.3	.0	189.8
Yellow-poplar	87.0	154.8	222.4	209.9	200.5	143.0	96.6	58.4	80.1	13.9	1,266.7
Blackgum	20.5	30.7	29.5	40.4	32.3	20.8	20.5	9.4	7.2	.0	211.3
Select white oaks	152.6	203.3	277.9	292.0	249.2	238.6	145.1	55.5	115.2	6.9	1,736.3
Select red oaks	28.5	56.2	72.4	78.9	88.1	103.8	68.6	61.0	132.6	11.8	701.9
Other white oaks	83.9	127.5	186.7	181.5	170.1	136.4	92.4	61.8	82.7	36.6	1,159.6
Other red oaks	110.1	188.9	242.0	260.6	292.1	260.6	183.1	105.2	162.1	29.7	1,834.5
Basswood	17.2	11.8	14.7	17.4	12.7	11.4	9.1	7.7	5.8	.0	107.9
Other hardwoods	268.7	240.5	235.7	175.1	115.2	74.3	74.5	57.5	69.9	23.8	1,335.3
Total hardwoods	1,225.7	1,616.3	1,992.7	1,842.7	1,692.4	1,379.9	959.8	584.0	964.0	184.6	12,442.1
All species	1,413.4	1,853.8	2,253.9	2,040.8	1,794.5	1,439.5	981.0	594.4	973.4	185.7	13,530.4

Table 33.--Net volume of growing-stock trees on timberland by species and diameter class, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	80.0	73.1	39.5	27.9	14.7	4.2	4.7	1.1	1.8	.0	247.1	8.7
Hard pines	92.3	185.4	204.7	168.5	109.0	64.0	35.1	10.8	8.7	.0	878.6	7.7
Other softwoods	7.4	10.6	13.0	11.5	9.3	12.5	5.0	4.2	15.9	2.4	91.9	16.7
Total softwoods	179.7	269.1	257.2	207.9	133.0	80.7	44.8	16.1	26.5	2.4	1,217.5	5.9
Red maple	106.0	114.6	108.1	74.3	58.7	50.8	29.5	28.3	42.4	9.4	622.3	6.0
Sugar maple	93.4	125.9	136.3	111.0	111.5	76.1	58.9	44.7	42.9	7.0	807.6	6.0
Hickory	161.7	266.9	330.2	338.0	249.8	167.2	117.1	58.5	65.2	8.8	1,763.3	3.2
Beech	16.7	31.1	41.8	57.7	76.9	65.4	73.2	80.0	180.0	51.8	674.6	7.9
Ash	60.2	94.1	90.9	92.3	77.6	48.1	38.5	23.1	39.7	2.6	567.1	5.7
Black walnut	19.3	33.2	42.7	27.2	22.6	17.5	11.7	3.6	5.0	.0	182.7	8.5
Sweetgum	21.1	34.2	37.1	30.5	33.0	20.6	13.9	11.7	12.8	.0	214.9	12.1
Yellow-poplar	90.3	175.3	261.0	285.3	316.6	316.0	219.0	141.4	150.2	18.0	1,973.1	4.5
Blackgum	34.0	40.1	35.1	32.8	38.8	19.7	21.3	11.4	11.6	1.3	246.0	7.0
Select white oaks	108.9	191.1	246.1	315.9	292.2	261.9	230.8	125.1	165.6	38.7	1,976.2	3.8
Select red oaks	21.5	49.7	68.8	91.4	101.1	101.9	88.6	70.8	155.4	30.3	779.5	5.2
Other white oaks	54.1	125.3	177.8	195.7	188.7	178.3	124.4	75.2	137.0	27.2	1,283.7	4.8
Other red oaks	71.1	145.3	205.7	238.4	307.0	286.5	245.0	158.7	232.2	36.5	1,926.4	3.8
Basswood	9.3	13.9	16.9	21.1	18.1	17.1	8.2	7.2	11.8	.9	124.5	11.7
Other hardwoods	253.5	273.5	249.2	205.4	173.2	143.8	99.1	57.1	117.5	38.3	1,610.5	5.2
Total hardwoods	1,121.3	1,714.2	2,047.5	2,116.8	2,065.9	1,770.8	1,379.0	896.7	1,369.3	270.8	14,752.4	1.4
All species	1,301.0	1,983.4	2,304.7	2,324.8	2,198.9	1,851.6	1,423.8	912.8	1,395.7	273.2	15,969.9	1.3
SE	2.3	2.1	2.0	2.0	2.1	2.5	3.0	3.7	4.0	9.7	1.3	

Net volume of growing-stock trees by diameter class, Kentucky, 1975 and 1988

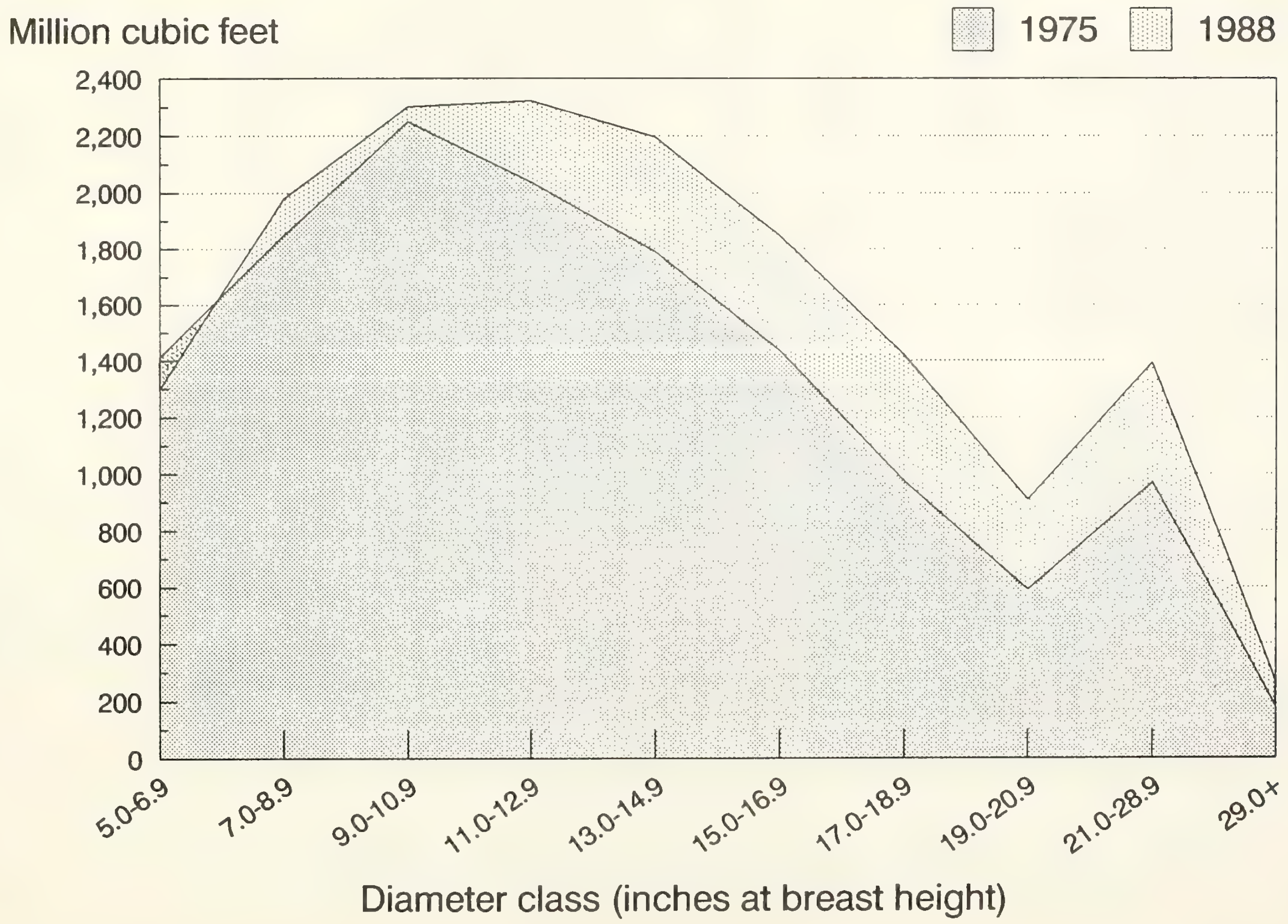


Table 34.--Net volume of growing stock in the sawlog portion of sawtimber trees on timberland by species and diameter class, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	33.2	24.3	13.1	3.9	4.4	1.0	1.7	.0	81.5	11.7
Hard pines	172.2	146.6	97.5	58.2	32.4	10.1	8.2	.0	525.1	8.3
Other softwoods	10.9	10.0	8.3	11.4	4.6	3.9	14.9	2.3	66.3	18.1
Total softwoods	216.3	180.9	118.9	73.5	41.3	15.0	24.7	2.3	672.9	6.8
Red maple	-	54.7	47.6	42.7	25.1	24.1	36.1	8.0	238.2	8.4
Sugar maple	-	81.7	90.3	63.9	50.1	38.0	36.5	5.9	366.4	7.5
Hickory	-	248.7	202.4	140.5	99.5	49.7	55.4	7.5	803.7	4.1
Beech	-	42.5	62.3	54.9	62.2	68.0	153.0	44.0	486.9	8.6
Ash	-	67.9	62.9	40.4	32.7	19.6	33.7	2.2	259.5	7.8
Black walnut	-	20.0	18.3	14.7	9.9	3.1	4.2	.0	70.2	11.0
Sweetgum	-	22.5	26.7	17.3	11.8	10.0	10.9	.0	99.2	13.1
Yellow-poplar	-	210.0	256.5	265.4	186.1	120.2	127.7	15.3	1,181.2	5.1
Blackgum	-	24.1	31.4	16.5	18.1	9.7	9.8	1.1	110.8	10.1
Select white oaks	-	232.5	236.7	220.0	196.1	106.3	140.8	32.9	1,165.3	4.4
Select red oaks	-	67.3	81.9	85.6	75.3	60.2	132.1	25.7	528.0	5.8
Other white oaks	-	144.0	152.9	149.7	105.7	63.9	116.4	23.1	755.8	5.3
Other red oaks	-	175.4	248.7	240.7	208.2	134.9	197.4	31.0	1,236.3	4.2
Basswood	-	15.5	14.7	14.3	7.0	6.1	10.0	.8	68.4	13.3
Other hardwoods	-	151.1	140.3	120.8	84.2	48.6	99.9	32.6	677.4	7.3
Total hardwoods	-	1,558.0	1,673.4	1,487.5	1,172.1	762.2	1,163.9	230.2	8,047.2	1.8
All species	216.3	1,738.9	1,792.3	1,561.0	1,213.5	777.1	1,188.6	232.5	8,720.2	1.6
SE	8.2	2.0	2.1	2.5	3.0	3.7	4.0	9.7	1.6	

Table 35.--Net volume of sawtimber trees on timberland by species and diameter class, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	72.8	40.8	35.7	27.9	18.6	.0	.0	.0	195.7
Hard pines	667.8	609.0	309.5	176.5	52.0	16.7	.0	.0	1,831.6
Other softwoods	30.2	20.3	20.3	21.5	16.5	26.0	43.5	4.4	182.8
Total softwoods	770.9	670.1	365.6	225.9	87.1	42.7	43.5	4.4	2,210.1
Red maple	-	160.5	217.0	145.1	72.0	62.5	89.1	70.4	816.8
Sugar maple	-	308.4	273.7	301.8	206.4	67.4	132.0	.4	1,290.1
Hickory	-	944.7	952.5	601.7	456.6	234.0	337.1	40.6	3,567.2
Beech	-	275.9	323.8	367.1	334.3	317.0	890.2	213.3	2,721.7
Ash	-	270.8	202.1	176.6	99.6	68.9	91.4	6.9	916.3
Black walnut	-	117.0	103.9	64.6	14.3	11.6	17.7	.0	329.1
Sweetgum	-	158.8	112.7	65.9	27.9	29.2	33.7	.0	428.2
Yellow-poplar	-	738.5	764.7	596.6	408.7	255.2	369.8	68.7	3,202.3
Blackgum	-	127.6	118.2	77.0	75.7	36.8	31.4	.0	466.6
Select white oaks	-	1,175.0	1,090.2	1,098.4	676.2	264.6	561.4	32.9	4,898.7
Select red oaks	-	282.5	330.5	421.2	290.0	252.4	592.9	56.4	2,225.9
Other white oaks	-	690.2	673.9	567.8	394.9	264.5	373.8	180.0	3,145.0
Other red oaks	-	945.7	1,161.7	1,086.6	802.3	457.9	746.0	136.0	5,336.3
Basswood	-	74.5	57.6	54.7	48.2	38.7	32.4	.0	305.9
Other hardwoods	-	702.9	504.9	339.6	379.7	290.1	365.3	134.9	2,717.5
Total hardwoods	-	6,973.1	6,887.4	5,964.7	4,286.8	2,650.6	4,664.4	940.5	32,367.4
All species	770.9	7,643.2	7,252.9	6,190.6	4,373.9	2,693.3	4,707.9	944.8	34,577.5

Table 36.--Net volume of sawtimber trees on timberland by species and diameter class, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	93.8	74.5	47.6	14.9	18.4	4.5	7.0	.0	260.6	12.3
Hard pines	640.5	618.3	440.2	280.4	160.3	49.7	43.3	.0	2,232.6	8.3
Other softwoods	34.7	39.2	34.2	54.0	22.8	20.4	78.6	13.7	297.6	18.7
Total softwoods	769.0	732.0	522.0	349.3	201.5	74.6	128.8	13.7	2,790.9	7.0
Red maple	-	260.8	235.2	215.3	136.6	131.2	209.7	56.5	1,245.2	8.8
Sugar maple	-	401.8	462.2	335.2	261.3	215.9	215.2	36.6	1,928.1	7.7
Hickory	-	1,254.5	1,057.5	761.8	560.7	287.0	354.6	48.5	4,324.5	4.2
Beech	-	209.3	319.2	299.8	362.6	399.0	986.0	298.9	2,874.8	8.9
Ash	-	355.1	318.5	208.1	170.3	108.8	203.1	15.3	1,379.2	8.2
Black walnut	-	98.1	90.0	76.2	54.3	18.9	24.9	.0	362.4	10.9
Sweetgum	-	111.3	132.0	91.0	64.3	59.0	59.8	.0	517.4	13.2
Yellow-poplar	-	1,019.9	1,323.6	1,432.0	1,052.7	722.7	807.4	104.3	6,462.6	5.3
Blackgum	-	116.6	153.7	84.5	94.9	54.6	57.6	7.8	569.6	10.2
Select white oaks	-	1,152.1	1,226.7	1,180.0	1,106.1	613.6	846.3	195.3	6,320.1	4.4
Select red oaks	-	313.7	398.0	424.4	397.6	328.3	769.8	163.1	2,794.9	5.9
Other white oaks	-	679.8	721.9	731.0	525.4	335.9	632.0	145.6	3,771.5	5.4
Other red oaks	-	817.5	1,201.4	1,212.5	1,107.8	736.9	1,166.6	209.5	6,452.2	4.3
Basswood	-	71.7	76.1	74.9	40.6	35.7	64.4	6.1	369.5	13.4
Other hardwoods	-	728.8	706.8	626.7	468.3	275.0	616.8	223.3	3,645.7	7.7
Total hardwoods		7,591.0	8,422.6	7,753.4	6,403.5	4,322.4	7,014.1	1,510.6	43,017.7	1.9
All species	769.0	8,323.0	8,944.5	8,102.7	6,605.0	4,397.0	7,142.9	1,524.3	45,808.6	1.8
SE	8.5	2.0	2.2	2.5	3.1	3.8	4.1	9.5	1.8	

Table 37.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	46.5	-	-	-	46.5	195.7	-	-	-	195.7
Hard pines	27.0	21.2	197.1	-	245.3	133.0	187.2	1,511.4	-	1,831.6
Other softwoods	81.8	6.3	15.7	8.1	111.9	140.8	11.1	21.4	9.5	182.8
Total softwoods	155.3	27.4	212.8	8.1	403.6	469.6	198.3	1,532.8	9.5	2,210.1
Red maple	61.2	88.3	235.4	54.3	439.2	61.2	125.4	476.9	153.3	816.8
Sugar maple	102.3	142.7	329.4	133.6	708.0	116.6	216.6	646.8	310.1	1,290.1
Hickory	275.1	441.2	629.2	324.5	1,670.0	283.0	715.0	1,756.4	812.7	3,567.2
Beech	53.1	171.2	1,157.9	739.7	2,122.0	56.1	187.0	1,405.8	1,072.8	2,721.7
Ash	116.1	150.2	127.6	49.4	443.4	124.1	277.9	377.8	136.4	916.3
Black walnut	33.9	29.5	39.6	5.2	108.2	33.9	79.9	184.5	30.8	329.1
Sweetgum	26.3	27.9	60.8	41.5	156.6	30.0	56.5	212.9	128.7	428.2
Yellow-poplar	325.8	352.6	649.4	371.3	1,699.1	351.9	536.1	1,327.1	987.2	3,202.3
Blackgum	40.3	63.2	97.7	19.5	220.8	42.4	90.5	278.3	55.4	466.6
Select white oaks	525.4	594.4	970.6	543.1	2,633.5	557.6	872.5	2,272.2	1,196.4	4,898.7
Select red oaks	396.3	517.7	505.4	193.5	1,612.9	404.8	586.2	926.5	308.5	2,225.9
Other white oaks	344.6	441.8	692.8	301.8	1,780.9	366.3	575.3	1,592.8	610.6	3,145.0
Other red oaks	489.0	675.6	1,277.8	786.5	3,228.8	525.1	885.2	2,301.9	1,624.1	5,336.3
Basswood	36.2	40.3	89.1	8.3	173.9	40.1	42.3	202.7	20.9	305.9
Other hardwoods	261.9	368.0	659.3	220.4	1,509.6	299.3	505.2	1,453.6	459.4	2,717.5
Total hardwoods	3,087.4	4,104.7	7,522.2	3,792.6	18,507.0	3,292.3	5,751.6	15,416.1	7,907.4	32,367.4
Percent of hardwood in each grade	17	22	41	20	100	10	18	48	24	100

Table 38.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	44.8	-	-	-	44.8	260.6	-	-	-	260.6
Hard pines	86.6	65.4	381.7	-	533.6	260.5	246.9	1,725.3	-	2,232.6
Other softwoods	145.5	13.2	24.9	5.9	189.5	225.5	24.4	38.5	9.2	297.6
Total softwoods	276.8	78.6	406.6	5.9	767.9	746.6	271.3	1,763.8	9.2	2,790.9
Red maple	23.6	106.1	434.7	185.0	749.3	23.6	139.8	720.8	360.9	1,245.2
Sugar maple	163.3	164.7	435.1	301.1	1,064.2	198.6	267.5	870.0	592.0	1,928.1
Hickory	219.4	589.0	691.7	512.4	2,012.5	229.2	1,053.9	1,883.6	1,157.7	4,324.5
Beech	45.6	133.4	1,156.3	1,011.0	2,346.3	47.5	140.5	1,346.2	1,340.5	2,874.8
Ash	172.9	225.2	236.1	71.4	705.6	190.3	415.1	590.5	183.4	1,379.2
Black walnut	30.2	44.6	82.0	17.5	174.3	32.1	77.9	210.0	42.3	362.4
Sweetgum	37.3	41.6	90.4	104.8	274.1	37.9	84.2	195.2	200.1	517.4
Yellow-poplar	685.1	949.3	1,438.0	1,046.8	4,119.1	706.0	1,279.4	2,491.0	1,986.3	6,462.6
Blackgum	37.8	76.9	145.2	39.5	299.4	37.8	118.7	311.3	102.0	569.6
Select white oaks	650.1	897.4	1,199.8	1,194.1	3,941.3	668.1	1,361.9	2,303.9	1,986.2	6,320.1
Select red oaks	429.3	534.7	740.0	379.2	2,083.1	440.1	638.7	1,130.6	585.5	2,794.9
Other white oaks	293.5	613.7	834.4	628.2	2,369.9	301.4	884.7	1,579.2	1,006.2	3,771.5
Other red oaks	559.8	970.4	1,577.9	1,325.3	4,433.3	562.7	1,237.9	2,424.4	2,227.2	6,452.2
Basswood	37.3	44.3	114.1	26.0	221.8	39.1	73.9	214.4	42.0	369.5
Other hardwoods	225.2	446.9	1,063.6	474.3	2,210.1	242.1	605.2	1,898.3	899.9	3,645.7
Total hardwoods	3,610.2	5,838.2	10,239.3	7,316.4	27,004.1	3,756.6	8,379.4	18,169.5	12,712.2	43,017.7
Percent of hardwood in each grade	13	22	38	27	100	9	19	42	30	100

Net volume of sawtimber trees by diameter class, Kentucky, 1975 and 1988

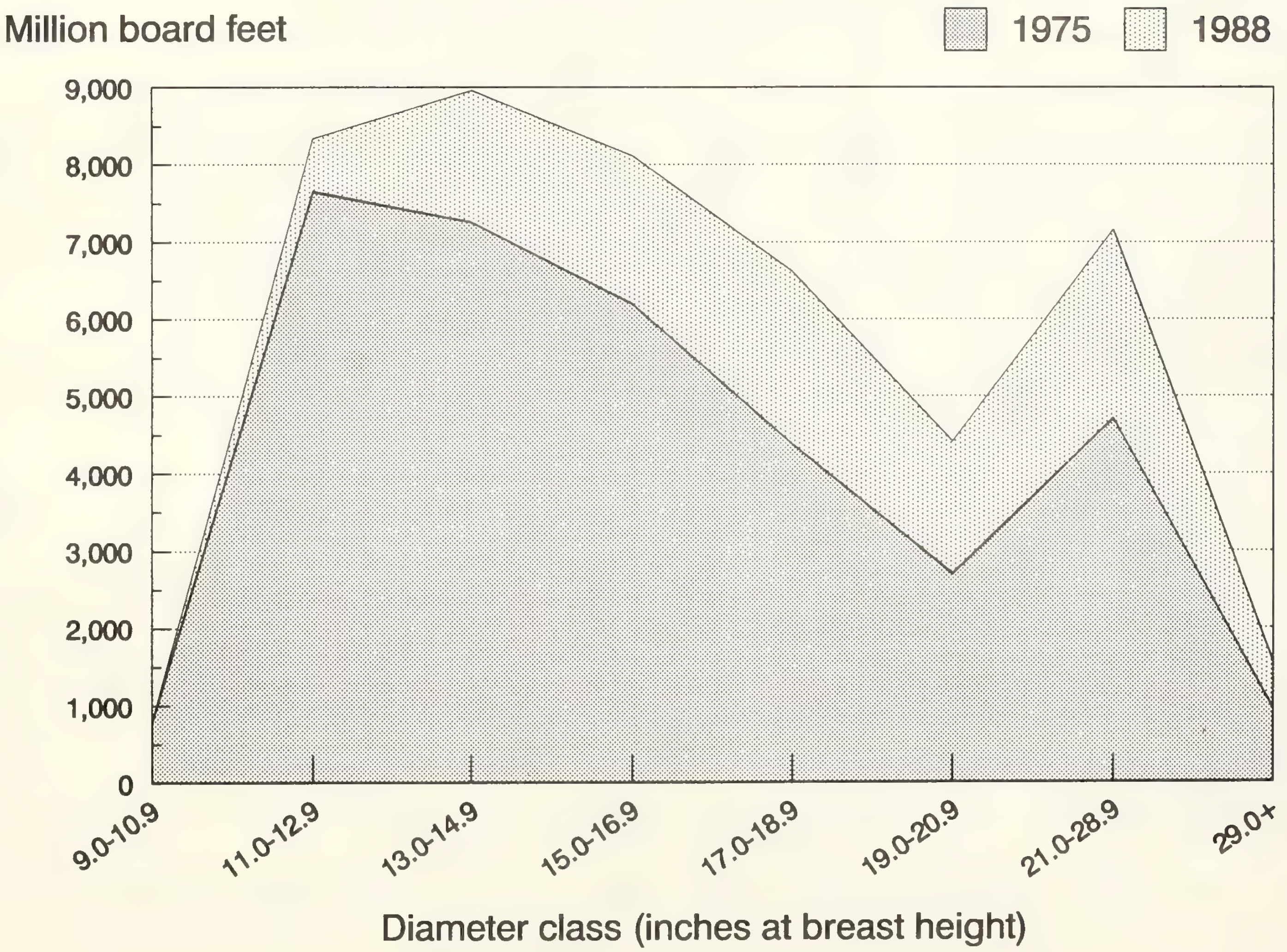


Table 39.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Eastern redcedar	14.5	-	-	-	30.3	44.8	111.5	-	-	-	149.2	260.6
Hard pines	160.5	110.5	233.9	-	28.7	533.6	478.1	433.7	1,260.4	-	60.3	2,232.6
Other softwoods	137.2	21.5	15.3	.0	15.5	189.5	205.9	43.2	19.3	.5	28.8	297.6
Total softwoods	312.1	132.0	249.2	.0	74.5	767.9	795.5	476.9	1,279.7	.5	238.4	2,790.9
Red maple	32.6	137.4	205.7	145.8	227.7	749.3	32.6	178.5	473.6	280.1	280.3	1,245.2
Sugar maple	89.3	201.6	359.9	212.7	200.5	1,064.2	89.3	330.2	806.8	431.7	270.1	1,928.1
Hickory	435.1	621.3	470.4	257.2	228.6	2,012.5	435.1	1,247.1	1,733.6	582.0	326.6	4,324.5
Beech	44.3	200.7	543.8	833.4	724.1	2,346.3	44.3	212.3	693.4	1,146.8	777.9	2,874.8
Ash	259.3	185.0	140.3	15.8	105.1	705.6	259.3	433.7	502.0	30.9	153.4	1,379.2
Black walnut	36.8	58.0	44.4	6.4	28.7	174.3	36.8	104.3	152.2	11.8	57.2	362.4
Sweetgum	75.3	73.8	71.0	31.2	22.7	274.1	75.3	151.5	195.0	61.9	33.8	517.4
Yellow-poplar	1,120.5	1,121.3	1,046.7	552.5	278.1	4,119.1	1,120.5	1,649.7	2,160.7	1,207.8	324.0	6,462.6
Blackgum	52.6	99.0	66.1	22.0	59.7	299.4	52.6	155.9	214.3	58.6	88.3	569.6
Select white oaks	823.6	1,285.0	1,033.9	358.3	440.5	3,941.3	823.6	1,938.1	2,284.8	755.0	518.6	6,320.1
Select red oaks	473.9	670.2	534.6	167.7	236.7	2,083.1	473.9	818.8	921.9	314.8	265.5	2,794.9
Other white oaks	390.2	816.6	686.1	257.5	219.6	2,369.9	390.2	1,172.4	1,491.0	446.3	271.7	3,771.5
Other red oaks	899.1	1,314.8	1,309.3	540.1	370.0	4,433.3	899.1	1,699.0	2,360.0	1,058.8	435.3	6,452.2
Basswood	71.2	40.9	42.0	17.6	50.0	221.8	71.2	88.2	127.0	25.4	57.8	369.5
Other hardwoods	310.8	552.4	586.0	330.1	430.8	2,210.1	310.8	796.8	1,295.6	632.8	609.7	3,645.7
Total hardwoods	5,114.5	7,378.2	7,140.3	3,748.3	3,622.8	27,004.1	5,114.5	10,976.4	15,411.9	7,044.6	4,470.3	43,017.7
All species	5,426.6	7,510.2	7,389.5	3,748.3	3,697.3	27,772.0	5,909.9	11,453.3	16,691.6	7,045.1	4,708.6	45,808.6

Table 40.--Average annual net change of growing-stock volume on timberland by species and component of change, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Eastern redcedar	4,707	4,417	9,124	-1,405	-362	7,357	-935	6,422
Hard pines	6,087	18,838	24,925	-11,335	-203	13,386	-12,469	917
Other softwoods	1,113	3,499	4,613	-115	-139	4,358	-1,264	3,094
Total softwoods	11,907	26,755	38,661	-12,855	-705	25,101	-14,668	10,433
Red maple	8,141	18,771	26,913	-1,090	-488	25,335	-6,441	18,895
Sugar maple	6,122	21,130	27,252	-1,999	-969	24,285	-4,886	19,399
Hickory	4,629	36,291	40,920	-13,242	-1,232	26,445	-17,930	8,516
Beech	1,063	13,464	14,527	-3,889	-3,230	7,408	-5,699	1,709
Ash	3,881	14,747	18,629	-2,275	-497	15,856	-6,558	9,299
Black walnut	1,797	3,967	5,764	-1,360	-305	4,099	-2,276	1,823
Sweetgum	2,209	4,915	7,125	-367	-157	6,601	-4,580	2,021
Yellow-poplar	10,269	72,748	83,017	-4,419	-476	78,121	-19,059	59,062
Blackgum	1,341	4,445	5,787	-753	-346	4,688	-1,824	2,864
Select white oaks	5,728	44,180	49,908	-4,885	-1,413	43,611	-24,173	19,438
Select red oaks	2,389	21,076	23,466	-5,622	-385	17,459	-10,767	6,693
Other white oaks	4,635	25,937	30,572	-6,424	-1,497	22,651	-12,419	10,232
Other red oaks	5,535	55,392	60,927	-16,093	-1,911	42,923	-35,444	7,479
Basswood	964	2,963	3,928	-654	-313	2,960	-1,487	1,473
Other hardwoods	15,957	34,679	50,636	-12,721	-1,953	35,961	-12,774	23,188
Total hardwoods	74,663	374,708	449,370	-75,794	-15,173	358,403	-166,315	192,089
All species	86,569	401,462	488,031	-88,649	-15,878	383,504	-180,983	202,521

Table 41.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Eastern redcedar	7,357	-935
Hard pines	13,386	-12,469
Other softwoods	4,358	-1,264
Total softwoods	25,101	-14,668
Red maple	25,335	-6,441
Sugar maple	24,285	-4,886
Hickory	26,445	-17,930
Beech	7,408	-5,699
Ash	15,856	-6,558
Black walnut	4,099	-2,276
Sweetgum	6,601	-4,580
Yellow-poplar	78,121	-19,059
Blackgum	4,688	-1,824
Select white oaks	43,611	-24,173
Select red oaks	17,459	-10,767
Other white oaks	22,651	-12,419
Other red oaks	42,923	-35,444
Basswood	2,960	-1,487
Other hardwoods	35,961	-12,774
Total hardwoods	358,403	-166,315
All species	383,504	-180,983

Table 42.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Eastern redcedar	6,025	-715
Hard pines	62,721	-29,745
Other softwoods	15,409	-5,107
Total softwoods	84,155	-35,567
Red maple	55,874	-19,983
Sugar maple	67,634	-15,370
Hickory	115,972	-54,647
Beech	39,597	-25,449
Ash	53,897	-15,307
Black walnut	9,913	-7,086
Sweetgum	18,227	-10,944
Yellow-poplar	333,533	-61,245
Blackgum	14,175	-5,658
Select white oaks	208,922	-94,029
Select red oaks	90,263	-42,537
Other white oaks	93,602	-42,642
Other red oaks	213,006	-121,679
Basswood	10,697	-5,254
Other hardwoods	111,874	-34,823
Total hardwoods	1,437,188	-556,655
All species	1,521,343	-592,222

Table 43.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Kentucky, 1974-87

(In thousands of feet)

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Eastern redcedar	-1,405	-1,901
Hard pines	-11,335	-22,771
Other softwoods	-115	-222
Total softwoods	-12,855	-24,893
Red maple	-1,090	-2,433
Sugar maple	-1,999	-5,915
Hickory	-13,242	-28,553
Beech	-3,889	-17,176
Ash	-2,275	-4,419
Black walnut	-1,360	-2,189
Sweetgum	-367	-475
Yellow-poplar	-4,419	-9,185
Blackgum	-753	-1,064
Select white oaks	-4,885	-10,239
Select red oaks	-5,622	-19,172
Other white oaks	-6,424	-19,309
Other red oaks	-16,093	-41,729
Basswood	-654	-711
Other hardwoods	-12,721	-21,377
Total hardwoods	-75,794	-183,948
All species	-88,649	-208,841

Table 44.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	2,170	30,040	32,210	-3,935	-7,097	-11,033
Other public	973	6,468	7,441	-747	-10,772	-11,519
Forest industry	349	9,112	9,462	0	-2,194	-2,194
Other private	21,608	312,783	334,391	-9,986	-146,251	-156,237
All classes	25,101	358,403	383,504	-14,668	-166,315	-180,983

Table 45.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	17,102	124,791	141,894	-9,931	-15,539	-25,470
Other public	3,634	34,995	38,629	-1,613	-34,563	-36,176
Forest industry	1,978	35,620	37,599	0	-5,626	-5,626
Other private	61,440	1,241,781	1,303,222	-24,024	-500,927	-524,950
All classes	84,155	1,437,188	1,521,343	-35,567	-556,655	-592,222

Table 46.--Change in area of timberland between inventories by forest-type group and stand-size class, Kentucky, 1975-88

(In thousands of acres)

Group or class	1975	1988	Change	Percent change
		FOREST-TYPE GROUP		
White/red pine	14.3	36.6	22.3	156
Loblolly/shortleaf	679.4	645.5	-33.9	-5
Oak/pine	800.1	857.9	57.8	7
Oak/hickory	9,169.4	9,515.8	346.4	4
Oak/gum/cypress	82.0	58.8	-23.2	-28
Elm/ash/red maple	642.7	571.3	-71.4	-11
Northern hardwoods	514.1	661.4	147.3	29
All groups	11,901.9	12,347.4	445.5	3.7
		STAND-SIZE CLASS		
Sawtimber	5,283.8	7,122.6	1,838.8	35
Poletimber	2,852.4	3,196.9	344.5	12
Sapling and seedling	3,751.0	2,027.9	-1,723.1	-46
Nonstocked	14.6	.0	-14.6	-100
All classes	11,901.9	12,347.4	445.5	3.7

Table 47.--Change in volume on timberland between inventories by species, Kentucky, 1975-88

Species	Growing-stock volume (In millions of cubic feet)				Sawtimber volume (In millions of board feet)			
	1975	1988	Change	Percent change	1975	1988	Change	Percent change
Eastern redcedar	168.5	247.1	78.6	47	195.7	260.6	64.9	33
Hard pines	862.8	878.6	15.8	2	1,831.6	2,232.6	401.0	22
Other softwoods	57.0	91.9	34.9	61	182.8	297.6	114.8	63
Total softwoods	1,088.3	1,217.5	129.2	12	2,210.1	2,790.9	580.8	26
Red maple	394.2	622.3	228.1	58	816.8	1,245.2	428.4	52
Sugar maple	573.0	807.6	234.6	41	1,290.1	1,928.1	638.0	49
Hickory	1,657.9	1,763.3	105.4	6	3,567.2	4,324.5	757.3	21
Beech	657.0	674.6	17.6	3	2,721.7	2,874.8	153.1	6
Ash	455.9	567.1	111.1	24	916.3	1,379.2	462.9	51
Black walnut	160.9	182.7	21.8	14	329.1	362.4	33.3	10
Sweetgum	189.8	214.9	25.1	13	428.2	517.4	89.2	21
Yellow-poplar	1,266.7	1,973.1	706.4	56	3,202.3	6,462.6	3,260.3	102
Blackgum	211.3	246.0	34.7	16	466.6	569.6	103.0	22
Select white oaks	1,736.3	1,976.2	239.9	14	4,898.7	6,320.1	1,421.4	29
Select red oaks	701.9	779.5	77.6	11	2,225.9	2,794.9	569.0	26
Other white oaks	1,159.6	1,283.7	124.1	11	3,145.0	3,771.5	626.5	20
Other red oaks	1,834.5	1,926.4	91.9	5	5,336.3	6,452.2	1,115.9	21
Basswood	107.9	124.5	16.6	15	305.9	369.5	63.6	21
Other hardwoods	1,335.3	1,610.5	275.2	21	2,717.5	3,645.7	928.2	34
Total hardwoods	12,442.1	14,752.4	2,310.3	19	32,367.4	43,017.7	10,650.3	33
All species	13,530.4	15,969.9	2,439.5	18.0	34,577.5	45,808.6	11,231.1	32.4

Table 48.--Output[a] of timber products by product, softwoods and hardwoods, and source of material, Kentucky, 1986

(In standard units and thousands of cubic feet)

Product and species	Output from roundwood			Output from primary manufacturing residue	Total, timber products output
	Board-foot[b] output	Cordwood output	Output in common units		
	Thousand board feet	Standard cords	-------------	Thousand cubic feet	-------------
			INDUSTRIAL PRODUCTS		
Sawlogs					
Softwoods	49,025	--	7,258	0	7,258
Hardwoods	774,519	--	109,380	0	109,380
Total	823,544	--	116,638	0	116,638
Veneer					
Softwoods	92	--	14	0	14
Hardwoods	13,641	--	1,930	0	1,930
Total	13,733	--	1,944	0	1,944
Other products[c]					
Softwoods	18,165	--	2,554	695	3,249
Hardwoods	15,124	--	2,130	8,133	10,263
Total	33,289	--	4,684	8,828	13,512
Pulpwood[d]					
Softwoods	--	25,653	2,181	739	2,920
Hardwoods	--	142,915	12,148	19,593	31,741
Total	--	168,568	14,329	20,332	34,661
			TOTAL, INDUSTRIAL PRODUCTS		
All products					
Softwoods	67,282	25,653	12,007	1,434	13,441
Hardwoods	803,284	142,915	125,588	27,726	153,314
Total	870,566	168,568	137,595	29,160	166,755
			NONINDUSTRIAL PRODUCTS		
Fuelwood[e]					
Softwoods	--	0	0	720	720
Hardwoods	--	300,000	24,000	19,728	43,728
Total	--	300,000	24,000	20,448	44,448
			TOTAL, ALL PRODUCTS		
All products[f]					
Softwoods	67,282	25,653	12,007	2,154	14,161
Hardwoods	803,284	442,915	149,588	47,454	197,042
Total	870,566	468,568	161,595	49,608	211,203

[a] The volume of roundwood harvested from timber within the state and received at primary manufacturing plants in the state, in other states, and in foreign countries. Reported volumes by product may be underestimated because overseas shipments are difficult to track.

[b] International 1/4-inch rule.

[c] Includes cooperage logs, boltwood for furniture dimension stock and dowels, large poles, cabin logs, mine timbers, fence posts, charcoal wood, and stock for golf blanks.

[d] A standard cord of pulpwood is equivalent to 85 cubic feet of solid wood.

[e] A standard cord of fuelwood is equivalent to 80 cubic feet of solid wood.

[f] Does not include 982,000 cubic feet of softwood and 9,129,000 cubic feet of hardwood residues used for agricultural bedding.

Table 49.--Output of roundwood products by product, softwoods and hardwoods, and source of material,[a] Kentucky, 1986

(In thousands of cubic feet)

Product and species	Growing-stock trees			Rough or rotten cull trees	Salvable dead trees	Other sources	All sources
	Poletimber	Sawtimber	Total				
	INDUSTRIAL PRODUCTS						
Sawlogs							
Softwoods	0	4,793	4,793	0	0	2,465	7,258
Hardwoods	77	74,269	74,346	1,411	1,487	32,136	109,380
Total	77	79,062	79,139	1,411	1,487	34,601	116,638
Veneer							
Softwoods	0	9	9	0	0	5	14
Hardwoods	1	1,346	1,347	0	0	583	1,930
Total	1	1,355	1,356	0	0	588	1,944
Other products							
Softwoods	47	980	1,027	59	183	1,285	2,554
Hardwoods	39	817	856	49	152	1,073	2,130
Total	86	1,797	1,883	108	335	2,358	4,684
Pulpwood							
Softwoods	27	1,159	1,186	0	0	995	2,181
Hardwoods	151	6,457	6,608	0	0	5,540	12,148
Total	178	7,616	7,794	0	0	6,535	14,329
	TOTAL, INDUSTRIAL PRODUCTS						
All products							
Softwoods	74	6,941	7,015	59	183	4,750	12,007
Hardwoods	268	82,889	83,157	1,460	1,639	39,332	125,588
Total	342	89,830	90,172	1,519	1,822	44,082	137,595
	NONINDUSTRIAL PRODUCTS						
Fuelwood							
Softwoods	0	0	0	0	0	0	0
Hardwoods	276	1,742	2,018	6,346	7,018	8,618	24,000
Total	276	1,742	2,018	6,346	7,018	8,618	24,000
	TOTAL, ALL PRODUCTS						
All products							
Softwoods	74	6,941	7,015	59	183	4,750	12,007
Hardwoods	544	84,631	85,175	7,806	8,657	47,950	149,588
Total	618	91,572	92,190	7,865	8,840	52,700	161,595

[a] Growing-stock trees, rough or rotten cull trees, and salvable dead trees are from timberland only. Other sources include trees less than 5.0 inches in diameter at breast height and tree tops and limbs from timberland, as well as any material from nontimberland or nonforest land such as fencerows, pastureland, and urban areas.

Table 50.--Timber removals from growing stock and sawtimber on timberland by component[a] and softwoods and hardwoods, Kentucky, 1986

Components of timber removals	Growing stock			Sawtimber		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	----- Thousand cubic feet -----			----- Thousand board feet[b] -----		
Roundwood products						
Sawlogs	4,793	74,346	79,139	18,952	334,436	353,388
Veneer	9	1,347	1,356	36	6,061	6,097
Other products	1,027	856	1,883	3,634	3,029	6,663
Pulpwood	1,186	6,608	7,794	3,780	21,057	24,837
Fuelwood	0	2,018	2,018	0	3,419	3,419
All products	7,015	85,175	92,190	26,402	368,002	394,404
Logging residue	619	5,018	5,637	1,223	4,738	5,961
Land use change	3,600	49,441	53,041	6,612	129,469	136,081
Reserve withrawls	3,431	6,450	9,881	9,501	14,691	24,192
Total removals	14,665	146,084	160,749	43,738	516,900	560,638

[a] Logging residue does not include material from tree tops and limbs. Land use change includes timber removed from land converted to a nonforest use, average annual basis. Reserve withdrawls include land sufficiently productive to be classed as timberland (wilderness, parks, etc.) but withdrawn from production, average annual basis.

[b] International 1/4-inch rule.

Table 51.--Volume of unused residues from primary manufacturing plants by softwoods and hardwoods, type of residue,[a] and industry, Kentucky, 1986

(In thousands of cubic feet)

Species and type of residue	Lumber	Veneer	Other industries	All industries
Softwoods				
Coarse	354	0	335	689
Fine	279	0	247	526
Total	633	0	582	1,215
Hardwoods				
Coarse	1,402	0	49	1,451
Fine	4,001	9	51	4,061
Total	5,403	9	100	5,512
All species				
Coarse	1,756	0	384	2,140
Fine	4,280	9	298	4,587
Total	6,036	9	682	6,727

[a] Coarse residues include slabs, edgings, trimmings, veneer cores, and other material suitable for chipping. Fine residues include sawdust, shavings, and other material unsuitable for chipping.

EASTERN
UNIT TABLES

Table 52.--Area of timberland by forest type, forest-type group, and stand-size class, Eastern Unit, Kentucky, 1975

(In thousands of acres)

Forest type	Stand-size class				All classes
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked	
Hemlock	14.3	.0	.0	.0	14.3
White/red pine group	14.3	.0	.0	.0	14.3
Shortleaf pine	13.5	.0	21.6	.0	35.0
Virginia pine	.0	.0	8.1	.0	8.1
Pitch pine	.0	8.1	.0	.0	8.1
Loblolly/shortleaf group	13.5	8.1	29.6	.0	51.2
Virginia pine/oak	.0	8.1	13.5	.0	21.6
Other oak/pine	13.5	.0	8.1	.0	21.6
Oak/pine group	13.5	8.1	21.6	.0	43.1
Post, black, or bear oak	62.1	13.5	.0	.0	75.6
Chestnut oak	108.0	.0	29.7	.0	137.7
White oak/red oak/hickory	54.0	40.5	13.6	.0	108.1
White oak	13.5	.0	21.6	.0	35.0
Northern red oak	13.6	.0	.0	.0	13.6
Y. poplar/wh. oak/no. red oak	13.5	13.5	8.1	.0	35.0
Black locust	.0	.0	8.1	.0	8.1
Yellow-poplar	13.5	35.0	97.2	.0	145.7
Scarlet oak	8.1	.0	26.9	.0	35.0
Mixed central hardwoods	720.7	199.9	202.0	.0	1,122.6
Oak/hickory group	1,006.9	302.4	407.2	.0	1,716.5
Sugar maple/beech/yellow birch	41.5	.0	.0	.0	41.5
Mixed northern hardwoods	13.5	8.1	.0	.0	21.6
Northern hardwoods group	54.9	8.1	.0	.0	63.1
All forest types	1,103.0	326.7	458.4	.0	1,888.1

Table 53.--Area of timberland by forest type, forest-type group, and stand-size class, Eastern Unit, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Hemlock	1.8	.0	.0	.0	1.8	79.0
White/red pine group	1.8	.0	.0	.0	1.8	79.0
Shortleaf pine	.0	6.7	5.6	.0	12.4	71.0
Virginia pine	7.2	11.9	.0	.0	19.0	72.9
Pitch pine	.0	.0	7.6	.0	7.6	100.0
Loblolly/shortleaf group	7.2	18.6	13.2	.0	39.0	46.4
Shortleaf pine/oak	.0	.4	.0	.0	.4	100.0
Virginia pine/oak	.0	.0	18.6	.0	18.6	73.4
Other oak/pine	7.3	13.3	.0	.0	20.6	57.8
Oak/pine group	7.3	13.8	18.6	.0	39.7	45.7
Post, black, or bear oak	25.5	.0	.0	.0	25.5	50.0
Chestnut oak	95.2	6.5	12.4	.0	114.1	23.1
White oak/red oak/hickory	64.9	27.2	21.3	.0	113.4	23.9
White oak	22.4	5.3	10.2	.0	37.8	42.6
Northern red oak	.9	.0	11.5	.0	12.4	92.7
Y. poplar/wh. oak/no. red oak	19.6	5.6	.0	.0	25.2	50.5
Black locust	.0	4.2	17.4	.0	21.5	52.8
Sweetgum/yellow-poplar	.0	17.5	.0	.0	17.5	71.7
Yellow-poplar	102.8	52.6	7.6	.0	163.0	19.9
Hawthorn/reverting field	.0	.0	3.8	.0	3.8	100.0
Scarlet oak	7.6	.0	13.7	.0	21.3	56.5
Mixed central hardwoods	827.3	156.6	76.4	.0	1,060.4	5.3
Oak/hickory group	1,166.2	275.4	174.2	.0	1,615.9	2.6
Sugar maple/beech/yellow birch	43.0	23.6	8.3	.0	74.9	31.4
Red maple/northern hardwoods	7.3	.0	.0	.0	7.3	100.0
Mixed northern hardwoods	13.4	6.7	5.3	.0	25.4	49.0
Northern hardwoods group	63.7	30.4	13.6	.0	107.7	25.2
All forest types	1,246.1	338.2	219.7	.0	1,804.0	1.5
SE	4.2	13.0	16.8	.0	1.5	

Table 54.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Eastern Unit, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9
Hard pines	7,539	12,419	4,651	3,058	1,378	627	275
Other softwoods	4,596	0	18	251	377	47	98
Total softwoods	12,136	12,419	4,669	3,309	1,754	674	373
Red maple	92,264	19,895	8,512	3,445	1,965	772	613
Sugar maple	60,435	5,943	2,308	1,763	1,659	1,044	686
Hickory	18,520	5,441	7,030	3,614	2,849	1,622	1,095
Beech	40,650	4,701	3,124	1,455	642	888	829
Ash	3,140	1,472	1,275	367	465	334	189
Black walnut	0	0	378	47	267	182	110
Sweetgum	2,064	0	434	139	397	37	79
Yellow-poplar	27,618	7,128	9,795	7,037	5,904	3,337	2,208
Blackgum	39,640	9,327	2,893	997	477	230	479
Select white oaks	9,048	7,731	5,913	2,865	2,511	1,931	1,095
Select red oaks	5,313	1,535	854	1,106	624	713	553
Other white oaks	17,179	1,783	4,320	3,012	2,266	1,971	1,566
Other red oaks	12,175	2,702	5,202	3,520	2,867	2,145	1,945
Basswood	10,020	5,465	2,303	1,439	1,286	845	317
Other hardwoods	152,591	60,403	17,491	5,907	2,480	1,417	840
Total hardwoods	490,656	133,525	71,833	36,712	26,662	17,469	12,605
All species	502,792	145,944	76,502	40,021	28,416	18,143	12,977
SE	7.0	10.5	6.5	6.0	5.3	5.3	5.2

Table 54.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	228	30	26	9	0	30,239	28.3
Other softwoods	69	6	3	15	1	5,482	51.4
Total softwoods	298	36	29	24	1	35,721	25.1
Red maple	217	211	139	192	21	128,245	14.2
Sugar maple	434	239	186	179	0	74,876	16.9
Hickory	972	507	235	201	40	42,127	18.2
Beech	393	467	442	817	88	54,497	19.1
Ash	65	139	59	55	0	7,559	33.4
Black walnut	44	75	0	8	0	1,112	26.0
Sweetgum	0	20	0	8	0	3,179	69.0
Yellow-poplar	1,789	958	463	356	27	66,621	13.9
Blackgum	141	205	67	64	0	54,521	20.8
Select white oaks	659	497	181	289	20	32,741	18.6
Select red oaks	426	363	159	508	65	12,219	29.0
Other white oaks	1,248	552	500	982	105	35,485	18.8
Other red oaks	1,539	1,165	594	655	77	34,586	15.6
Basswood	195	141	74	113	0	22,195	26.1
Other hardwoods	461	298	112	87	5	242,092	9.6
Total hardwoods	8,584	5,838	3,210	4,513	449	812,056	5.3
All species	8,882	5,874	3,239	4,537	449	847,777	5.0
SE	5.8	6.5	7.9	7.6	15.4	5.0	

Table 55.--Net dry weight of all live trees on timberland by species and diameter class, Eastern Unit, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Hard pines	465	296	425	303	205	146	151	25	33	12	2,063	21.9
Other softwoods	21	1	39	74	16	45	49	6	3	27	281	27.9
Total softwoods	486	297	464	377	221	191	201	31	36	39	2,344	19.4
Red maple	1,129	729	601	569	369	502	252	314	207	543	5,216	10.4
Sugar maple	553	320	478	697	821	683	563	367	335	566	5,382	12.0
Hickory	293	722	803	1,101	970	1,129	1,336	911	558	1,091	8,916	8.4
Beech	496	383	363	283	662	832	604	830	872	3,301	8,627	12.5
Ash	83	146	104	165	168	144	74	160	97	116	1,257	21.1
Black walnut	0	38	14	81	110	76	35	79	17	16	467	22.4
Sweetgum	6	37	21	130	18	58	0	26	0	23	319	52.2
Yellow-poplar	233	695	1,011	1,485	1,369	1,275	1,458	1,033	673	946	10,178	8.8
Blackgum	590	254	174	163	160	378	155	309	137	133	2,454	14.2
Select white oaks	266	482	491	772	1,029	891	720	755	365	1,082	6,854	10.5
Select red oaks	69	92	253	233	463	503	561	628	396	2,491	5,689	12.9
Other white oaks	161	421	629	851	1,203	1,302	1,454	890	1,057	4,388	12,355	10.7
Other red oaks	114	475	656	978	1,192	1,531	1,680	1,701	1,088	2,357	11,772	8.8
Basswood	128	233	248	388	432	247	218	194	163	351	2,602	15.0
Other commercial hardwoods	2,805	1,613	1,172	762	863	664	493	451	182	278	9,283	7.5
Noncommercial hardwoods	1,200	371	289	94	47	138	44	25	46	0	2,254	13.9
Total hardwoods	8,127	7,011	7,308	8,754	9,875	10,354	9,647	8,673	6,192	17,685	93,628	2.8
All species	8,613	7,308	7,772	9,131	10,097	10,545	9,848	8,704	6,228	17,725	95,972	2.7
SE	7.7	6.1	5.5	5.2	5.1	5.1	5.8	6.4	7.5	7.4	2.7	

Table 56.--Net dry weight[a] of all trees on timberland by class of material and species group, Eastern Unit, Kentucky, 1988

(In thousands of tons)

Class of material	Species group		All groups	SE
	Softwoods	Hardwoods		
Sawtimber trees:				
Sawlog portion	720	35,820	36,541	3.8
Upper stem	100	7,631	7,730	3.6
Total sawtimber trees	820	43,451	44,271	3.8
Poletimber trees	509	15,158	15,667	4.0
All growing stock	1,329	58,609	59,939	3.0
Rough cull trees[b]	7	1,496	1,503	10.6
Rotten cull trees[b]	5	3,741	3,745	7.7
Salvable dead trees[c]	35	1,371	1,406	14.7
Saplings[c]	486	8,127	8,613	7.7
Tops - growing stock	512	19,900	20,412	2.9
Tops - rough and rotten	5	1,755	1,759	6.4
All nongrowing stock	1,050	36,389	37,439	2.8
All classes	2,379	94,998	97,378	2.7
SE	19.4	2.8	2.7	

[a] Includes bark and sound cull; excludes rotten cull.

[b] Bole portion of trees 5.0 inches d.b.h. and larger.

[c] Includes entire tree aboveground.

Table 57.--Net volume of all trees on timberland by class of timber and species group, Eastern Unit, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	33.3	7.6	434.1	909.3	1,384.3	3.7
Upper stem	4.8	1.0	99.0	194.5	299.2	3.5
Total sawtimber trees	38.1	8.5	533.1	1,103.8	1,683.5	3.6
Poletimber trees	27.0	1.7	326.9	345.1	700.6	4.3
Total growing-stock trees	65.1	10.2	860.0	1,448.9	2,384.2	2.9
Rough trees:						
Sawtimber size	.3	.0	7.6	15.4	23.3	15.5
Poletimber size	.0	.0	6.5	14.0	20.5	14.0
Total rough trees	.3	.0	14.1	29.5	43.9	10.6
Rotten trees:						
Sawtimber size	.0	.0	19.0	71.8	90.8	8.9
Poletimber size	.1	.0	3.2	5.5	8.9	13.1
Total rotten trees	.1	.0	22.2	77.4	99.7	8.2
Salvable dead[a] trees:						
Sawtimber size	.4	.0	1.3	17.0	18.7	19.1
Poletimber size	.6	.0	2.7	6.1	9.4	19.4
Total salvable dead trees	1.0	.0	4.0	23.0	28.1	14.7
All classes	66.5	10.3	900.3	1,578.7	2,555.9	2.9
SE	22.1	32.0	6.1	3.9	2.9	

[a] Includes noncommercial species.

Table 58.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Eastern Unit, Kentucky, 1988

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
			All live		
			(In millions of cubic feet)		
Softwoods	.0	3.0	.0	72.7	75.7
Hardwoods	81.0	56.3	35.1	2,279.6	2,452.0
Total all live	81.0	59.3	35.1	2,352.3	2,527.7
			Growing stock		
			(In millions of cubic feet)		
Softwoods	.0	3.0	.0	72.3	75.3
Hardwoods	76.5	56.1	30.1	2,146.1	2,308.8
Total growing stock	76.5	59.2	30.1	2,218.4	2,384.2
			Sawtimber		
			(In millions of board feet)		
Softwoods	.0	4.3	.0	166.5	170.8
Hardwoods	237.0	110.9	93.7	6,607.5	7,049.1
Total sawtimber	237.0	115.2	93.7	6,774.0	7,220.0

Table 59.--Net volume of growing-stock trees on timberland by species and diameter class, Eastern Unit, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Hard pines	10.2	17.3	15.6	13.1	5.2	5.2	4.0	.6	.0	.0	71.2
Other softwoods[a]	.0	.2	.5	.2	.4	.1	.3	.3	.3	.0	2.3
Total softwoods	10.2	17.5	16.1	13.3	5.6	5.3	4.3	.9	.3	.0	73.5
Red maple	13.1	13.2	6.4	9.2	7.5	5.7	4.5	2.2	6.4	.6	68.7
Sugar maple	9.9	10.6	13.2	16.8	7.4	9.5	9.0	5.0	7.8	.1	89.3
Hickory	20.6	26.6	24.0	32.3	29.6	28.2	18.6	10.2	12.2	5.6	207.9
Beech	2.5	12.3	12.4	14.1	15.1	14.9	20.1	17.3	44.8	5.8	159.3
Ash	1.3	5.5	11.7	2.7	5.9	2.6	1.4	.0	1.6	.0	32.8
Black walnut	4.5	1.1	3.3	2.0	.0	2.7	.0	.0	.0	.0	13.5
Sweetgum	.0	1.6	2.6	.0	.0	.0	.0	.0	3.8	.0	8.0
Yellow-poplar	25.1	46.2	68.4	53.0	46.5	34.2	17.5	8.9	17.3	.8	318.0
Blackgum	1.9	3.6	3.0	6.1	6.7	7.2	6.2	4.8	.7	.0	40.2
Select white oaks	21.6	17.0	16.2	16.5	22.4	28.9	14.8	15.7	20.8	1.4	175.2
Select red oaks	2.8	5.3	7.1	10.1	12.5	8.3	12.6	9.9	28.6	6.0	103.4
Other white oaks	9.1	18.1	24.2	23.1	25.4	22.5	24.1	23.4	48.6	30.7	249.3
Other red oaks	13.9	25.5	31.7	30.6	46.9	46.4	41.8	16.6	30.2	5.2	288.8
Basswood	8.9	9.1	8.5	5.2	6.5	6.7	3.1	4.6	3.2	.0	55.9
Other hardwoods	38.5	16.3	23.8	24.1	9.9	7.1	3.9	5.8	8.2	1.4	138.9
Total hardwoods	173.6	211.8	256.4	245.9	242.3	224.9	177.7	124.4	234.3	57.6	1,949.0
All species	183.8	229.4	272.5	259.2	247.8	230.2	182.0	125.3	234.6	57.6	2,022.5

[a] Includes Eastern redcedar.

Table 60.--Net volume of growing-stock trees on timberland by species and diameter class, Eastern Unit, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	10.4	16.6	13.4	8.4	5.5	6.2	1.4	1.2	.6	.0	63.7	22.8
Other softwoods	.1	1.6	3.8	.6	1.8	2.4	.2	.1	1.0	.1	11.7	29.9
Total softwoods	10.4	18.3	17.2	9.1	7.2	8.6	1.6	1.3	1.5	.1	75.3	19.6
Red maple	21.1	21.4	20.9	12.3	13.8	6.6	7.3	5.4	11.7	2.4	122.7	12.5
Sugar maple	5.1	10.3	17.8	17.1	15.8	13.6	9.2	9.5	12.0	.0	110.4	13.6
Hickory	16.5	20.6	31.2	26.8	27.2	33.8	21.4	13.0	14.9	5.9	211.2	8.7
Beech	5.4	7.0	6.6	15.4	18.6	13.2	19.4	22.7	63.2	12.0	183.5	15.1
Ash	3.1	2.1	5.3	5.7	4.5	2.3	5.5	2.8	4.3	.0	35.7	21.3
Black walnut	1.1	.3	2.0	2.8	2.7	1.1	2.7	.0	.6	.0	13.3	23.9
Sweetgum	.9	.6	4.3	.6	1.9	.0	.8	.0	.6	.0	9.6	54.2
Yellow-poplar	25.9	48.4	77.3	69.0	63.2	72.5	49.8	30.0	32.6	5.3	474.1	9.1
Blackgum	6.3	4.8	4.6	3.0	10.4	4.1	8.0	3.4	3.2	.0	47.8	17.8
Select white oaks	15.3	15.7	25.1	30.3	24.5	19.6	18.6	8.3	18.4	2.4	178.2	10.9
Select red oaks	2.0	6.8	6.4	10.9	12.7	13.1	14.2	7.2	36.1	7.2	116.8	13.4
Other white oaks	9.6	16.5	21.4	28.5	31.8	34.5	19.0	20.2	56.0	12.7	250.3	11.0
Other red oaks	12.1	20.2	29.8	34.8	42.6	47.2	45.6	28.7	46.1	9.2	316.1	8.9
Basswood	6.4	8.2	12.7	12.9	7.5	5.8	5.0	3.5	7.0	.0	69.1	15.8
Other hardwoods	38.2	31.6	23.2	21.7	18.5	13.9	11.2	5.3	6.0	.7	170.2	8.8
Total hardwoods	168.9	214.6	288.4	291.9	295.6	281.3	237.8	159.9	312.6	57.8	2,308.8	3.1
All species	179.4	232.9	305.6	300.9	302.9	289.9	239.4	161.2	314.1	57.9	2,384.2	2.9
SE	7.0	6.1	5.5	5.4	5.4	6.0	6.7	8.3	8.0	16.3	2.9	

Table 61.--Net volume of sawtimber trees on timberland by species and diameter class, Eastern Unit, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
All softwoods	33.2	33.1	23.6	15.3	19.2	10.7	9.9	.0	145.1
Total softwoods	33.2	33.1	23.6	15.3	19.2	10.7	9.9	.0	145.1
Red maple	-	26.5	20.3	19.3	14.4	6.5	23.4	2.0	112.4
Sugar maple	-	68.1	31.8	47.5	49.6	23.7	44.9	.5	266.1
Hickory	-	119.5	121.7	116.6	83.0	47.1	59.7	28.8	576.3
Beech	-	61.7	66.5	65.5	95.1	89.4	250.0	31.4	659.6
Ash	-	12.4	31.2	12.8	6.8	.0	11.0	.0	74.3
Black walnut	-	11.5	.0	20.3	.0	.0	.0	.0	31.7
Sweetgum	-	.0	.0	.0	.0	.0	10.0	.0	10.0
Yellow-poplar	-	183.5	179.2	144.0	72.1	39.1	83.5	3.8	705.2
Blackgum	-	17.2	19.8	23.6	19.9	17.2	3.1	.0	100.9
Select white oaks	-	58.5	95.1	126.6	63.9	73.0	93.3	7.2	517.6
Select red oaks	-	33.3	42.5	32.4	54.2	41.9	122.5	29.9	356.7
Other white oaks	-	84.2	96.9	90.2	109.6	102.5	230.7	155.4	869.5
Other red oaks	-	105.2	185.7	190.8	177.4	71.9	142.2	26.3	899.5
Basswood	-	21.0	26.6	30.1	14.7	23.2	17.5	.0	133.1
Other hardwoods	-	85.1	41.6	32.0	15.1	28.8	42.1	6.5	251.2
Total hardwoods	-	887.7	958.9	951.7	775.8	564.3	1,133.9	291.8	5,564.1
All species	33.2	920.7	982.5	967.0	795.0	575.0	1,143.9	291.8	5,709.3

Table 62.--Net volume of sawtimber trees on timberland by species and diameter class, Eastern Unit, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	41.9	32.7	20.7	27.4	6.3	5.4	2.8	.0	137.3	19.8
Other softwoods	9.2	2.2	4.9	10.3	.9	.5	4.8	.6	33.5	30.9
Total softwoods	51.2	35.0	25.7	37.7	7.2	5.8	7.7	.6	170.8	16.8
Red maple	-	41.2	54.8	26.2	34.2	26.0	58.0	14.2	254.6	16.5
Sugar maple	-	56.8	61.4	57.4	41.1	42.9	58.2	.2	317.8	16.0
Hickory	-	89.6	111.6	154.0	100.6	63.8	79.8	33.8	633.1	10.5
Beech	-	51.2	71.7	58.3	92.9	112.9	336.1	65.9	789.0	16.5
Ash	-	20.5	17.9	9.5	25.0	12.8	22.3	.0	108.0	25.4
Black walnut	-	10.6	10.6	4.9	12.6	.0	3.0	.0	41.7	28.4
Sweetgum	-	1.4	7.1	.0	3.8	.0	2.6	.0	14.8	57.5
Yellow-poplar	-	235.8	250.7	314.3	229.4	149.1	173.4	26.9	1,379.7	11.1
Blackgum	-	10.7	39.5	16.8	35.0	14.8	16.8	.0	133.5	24.7
Select white oaks	-	97.8	100.5	86.7	89.0	40.7	91.4	14.5	520.7	11.9
Select red oaks	-	32.9	49.1	53.5	61.8	32.8	175.7	34.9	440.7	14.6
Other white oaks	-	92.6	117.9	135.6	79.4	87.4	267.4	68.1	848.3	12.2
Other red oaks	-	110.5	157.2	189.7	200.0	129.5	231.9	51.7	1,070.6	10.0
Basswood	-	43.1	30.5	25.2	23.5	17.8	40.3	.0	180.4	18.5
Other hardwoods	-	71.3	70.8	59.5	53.1	26.9	30.9	3.9	316.3	14.6
Total hardwoods	-	966.0	1,151.4	1,191.4	1,081.3	757.3	1,587.6	314.1	7,049.1	4.0
All species	51.2	1,000.9	1,177.0	1,229.2	1,088.5	763.2	1,595.3	314.7	7,220.0	3.9
SE	27.3	5.5	5.6	6.1	6.8	8.5	8.2	16.2	3.9	

Table 63.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Eastern Unit, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
All softwoods	34.8	1.7	18.6	.0	55.2	59.8	5.8	79.5	.0	145.1
Total softwoods	34.8	1.7	18.6	.0	55.2	59.8	5.8	79.5	.0	145.1
Red maple	8.8	16.5	33.0	7.3	65.6	8.8	21.6	62.6	19.3	112.4
Sugar maple	35.3	20.1	71.4	39.4	166.2	35.3	22.0	126.0	82.8	266.1
Hickory	70.8	76.1	124.3	63.8	335.1	70.8	125.6	265.0	115.0	576.3
Beech	11.9	22.0	340.4	157.0	531.4	12.4	22.0	397.8	227.3	659.6
Ash	.0	12.6	13.6	4.5	30.7	.0	34.4	29.9	10.0	74.3
Black walnut	5.5	1.9	12.5	.4	20.3	5.5	1.9	22.1	2.2	31.7
Sweetgum	.0	5.4	2.3	2.3	10.0	.0	5.4	2.3	2.3	10.0
Yellow-poplar	27.8	53.5	148.0	113.3	342.5	27.8	93.7	280.6	303.0	705.2
Blackgum	17.9	22.9	19.5	3.5	63.8	19.8	27.7	45.8	7.6	100.9
Select white oaks	46.8	70.1	141.3	105.7	364.0	50.5	83.0	228.0	156.1	517.6
Select red oaks	69.1	66.6	98.1	47.2	281.0	71.6	70.2	142.6	72.3	356.7
Other white oaks	156.8	141.1	261.9	128.5	688.4	160.0	156.3	387.5	165.8	869.5
Other red oaks	136.0	111.8	221.7	139.2	608.7	139.2	135.8	348.0	276.5	899.5
Basswood	15.9	11.3	54.6	3.7	85.5	15.9	11.5	98.6	7.0	133.1
Other hardwoods	39.1	28.3	43.8	13.4	124.5	39.4	40.5	130.7	40.6	251.2
Total hardwoods	641.8	660.1	1,586.4	829.2	3,717.6	657.1	851.7	2,567.4	1,487.8	5,564.1
Percent of hardwood in each grade	17	18	43	22	100	12	15	46	27	100

Table 64.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Eastern Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Hard pines	10.4	5.6	26.0	-	41.9	18.1	16.3	102.8	-	137.3
Other softwoods	17.1	.0	.0	.0	17.1	29.2	1.6	2.2	.6	33.5
Total softwoods	27.5	5.6	26.0	.0	59.0	47.3	17.9	105.0	.6	170.8
Red maple	4.6	16.7	94.6	42.8	158.7	4.6	22.4	146.9	80.7	254.6
Sugar maple	35.6	27.5	92.9	43.7	199.6	44.3	33.7	141.7	98.1	317.8
Hickory	57.9	124.4	149.0	100.6	431.9	61.2	159.5	261.5	150.8	633.1
Beech	7.6	19.7	362.0	276.8	666.1	8.0	22.5	401.8	356.7	789.0
Ash	16.7	18.4	26.5	8.0	69.5	18.1	23.5	52.0	14.4	108.0
Black walnut	3.2	6.6	9.3	1.4	20.5	5.1	11.1	21.7	3.8	41.7
Sweetgum	1.2	2.2	1.7	1.3	6.4	1.2	6.0	4.2	3.4	14.8
Yellow-poplar	107.0	205.0	302.7	278.5	893.2	109.0	248.9	487.8	533.9	1,379.7
Blackgum	11.2	23.2	36.8	12.1	83.3	11.2	33.3	67.1	21.9	133.5
Select white oaks	28.9	74.4	96.3	122.8	322.3	28.9	97.1	176.7	218.0	520.7
Select red oaks	79.8	103.2	113.6	62.0	358.6	81.1	116.6	154.3	88.6	440.7
Other white oaks	90.6	170.1	228.1	149.0	637.8	92.4	213.9	337.6	204.4	848.3
Other red oaks	102.7	161.8	316.1	222.3	802.8	102.7	192.5	425.5	349.9	1,070.6
Basswood	16.9	22.0	59.2	8.7	106.8	16.9	33.5	114.2	15.9	180.4
Other hardwoods	27.3	47.2	71.2	28.4	174.2	28.6	63.2	141.9	82.7	316.3
Total hardwoods	591.1	1,022.5	1,959.9	1,358.4	4,931.8	613.3	1,277.7	2,935.1	2,223.1	7,049.1
Percent of hardwood in each grade	12	21	40	27	100	9	18	42	31	100

Table 65.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Eastern Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Hard pines	16.7	11.5	13.7	-	.0	41.9	31.3	31.3	73.8	-	.9	137.3
Other softwoods	12.2	.0	.0	.0	4.9	17.1	20.2	3.1	1.2	.0	9.0	33.5
Total softwoods	28.9	11.5	13.7	.0	4.9	59.0	51.5	34.4	75.0	.0	9.9	170.8
Red maple	7.4	22.6	31.5	35.7	61.5	158.7	7.4	31.1	77.3	66.4	72.5	254.6
Sugar maple	6.9	35.1	74.7	23.6	59.4	199.6	6.9	40.7	122.0	70.4	77.8	317.8
Hickory	117.8	126.7	98.8	40.6	48.1	431.9	117.8	167.3	230.6	58.9	58.5	633.1
Beech	7.8	30.0	140.0	215.4	272.8	666.1	7.8	34.6	160.0	291.6	294.9	789.0
Ash	20.1	18.6	20.4	1.8	8.6	69.5	20.1	24.4	50.7	1.8	10.9	108.0
Black walnut	5.1	3.1	9.3	.0	2.9	20.5	5.1	9.9	23.8	.0	2.9	41.7
Sweetgum	2.6	3.8	.0	.0	.0	6.4	2.6	10.9	1.4	.0	.0	14.8
Yellow-poplar	181.1	242.1	228.4	169.8	71.8	893.2	181.1	303.1	432.3	375.1	88.0	1,379.7
Blackgum	15.7	31.4	16.1	7.2	12.9	83.3	15.7	46.4	41.2	12.2	18.1	133.5
Select white oaks	43.7	104.8	82.3	64.5	26.9	322.3	43.7	137.3	174.4	134.4	30.7	520.7
Select red oaks	79.8	148.8	66.5	27.3	36.2	358.6	79.8	168.0	105.3	46.9	40.6	440.7
Other white oaks	123.9	228.5	175.2	46.0	64.2	637.8	123.9	288.3	289.8	75.3	71.1	848.3
Other red oaks	175.1	218.4	274.5	64.5	70.3	802.8	175.1	264.3	407.8	140.6	82.7	1,070.6
Basswood	33.8	20.7	14.9	4.9	32.4	106.8	33.8	36.4	66.3	7.8	36.1	180.4
Other hardwoods	38.6	61.3	30.8	19.4	24.1	174.2	38.6	85.0	84.9	65.2	42.6	316.3
Total hardwoods	859.5	1,295.9	1,263.6	720.8	792.1	4,931.8	859.5	1,647.9	2,267.8	1,346.6	927.3	7,049.1
All species	888.4	1,307.4	1,277.3	720.8	797.0	4,990.8	911.0	1,682.4	2,342.8	1,346.6	937.2	7,220.0

Table 66.--Average annual net change of growing-stock volume on timberland by species and component of change, Eastern Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Hard pines	983	1,292	2,275	-1,346	0	928	-1,583	-654
Other softwoods	145	842	987	-92	-86	809	0	809
Total softwoods	1,128	2,134	3,262	-1,439	-86	1,737	-1,583	154
Red maple	1,167	3,988	5,155	-31	-209	4,915	-236	4,679
Sugar maple	708	2,210	2,919	-282	-117	2,520	-693	1,827
Hickory	639	4,118	4,757	-2,597	-149	2,011	-1,724	287
Beech	323	4,347	4,670	-1,064	-1,138	2,467	-369	2,098
Ash	15	844	859	-75	-80	704	-450	254
Black walnut	71	335	406	-192	0	214	-231	-17
Sweetgum	79	144	223	-81	0	143	0	143
Yellow-poplar	3,523	17,231	20,754	-505	-81	20,167	-6,641	13,526
Blackgum	396	591	988	0	0	988	-332	655
Select white oaks	714	3,537	4,251	-975	-215	3,061	-2,802	259
Select red oaks	285	2,796	3,081	-916	-63	2,103	-942	1,160
Other white oaks	1,218	4,186	5,404	-1,748	-535	3,121	-3,029	91
Other red oaks	1,031	9,685	10,716	-2,428	-460	7,828	-5,462	2,366
Basswood	536	1,835	2,371	-279	-146	1,947	-804	1,143
Other hardwoods	1,724	3,089	4,813	-1,426	-46	3,341	-627	2,715
Total hardwoods	12,432	58,936	71,368	-12,599	-3,239	55,531	-24,343	31,188
All species	13,560	61,070	74,630	-14,037	-3,326	57,267	-25,925	31,342

Table 67.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Eastern Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Hard pines	928	-1,583
Other softwoods	809	0
Total softwoods	1,737	-1,583
Red maple	4,915	-236
Sugar maple	2,520	-693
Hickory	2,011	-1,724
Beech	2,467	-369
Ash	704	-450
Black walnut	214	-231
Sweetgum	143	0
Yellow-poplar	20,167	-6,641
Blackgum	988	-332
Select white oaks	3,061	-2,802
Select red oaks	2,103	-942
Other white oaks	3,121	-3,029
Other red oaks	7,828	-5,462
Basswood	1,947	-804
Other hardwoods	3,341	-627
Total hardwoods	55,531	-24,343
All species	57,267	-25,925

Table 68.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Eastern Unit, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Hard pines	1,500	-3,644
Other softwoods	4,370	0
Total softwoods	5,871	-3,644
Red maple	12,327	0
Sugar maple	7,298	-2,819
Hickory	9,695	-4,779
Beech	12,507	-1,285
Ash	2,922	0
Black walnut	1,130	-262
Sweetgum	421	0
Yellow-poplar	76,267	-17,807
Blackgum	4,395	-1,566
Select white oaks	11,338	-11,075
Select red oaks	12,124	-4,852
Other white oaks	10,357	-12,197
Other red oaks	34,346	-19,523
Basswood	7,129	-3,028
Other hardwoods	7,549	-1,904
Total hardwoods	209,808	-81,098
All species	215,679	-84,742

Table 69.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Eastern Unit, Kentucky, 1974-87

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Hard pines	-1,346	-3,241
Other softwoods	-92	-222
Total softwoods	-1,439	-3,463
Red maple	-31	0
Sugar maple	-282	-1,065
Hickory	-2,597	-8,447
Beech	-1,064	-5,547
Ash	-75	0
Black walnut	-192	-408
Sweetgum	-81	0
Yellow-poplar	-505	-428
Select white oaks	-975	-3,266
Select red oaks	-916	-3,502
Other white oaks	-1,748	-7,531
Other red oaks	-2,428	-7,558
Basswood	-279	0
Other hardwoods	-1,426	-1,075
Total hardwoods	-12,599	-38,829
All species	-14,037	-42,292

Table 70.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Eastern Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	0	5,186	5,186	0	-478	-478
Forest industry	0	1,644	1,644	0	-474	-474
Other private	1,737	48,700	50,437	-1,583	-23,391	-24,973
All classes	1,737	55,531	57,267	-1,583	-24,343	-25,925

Table 71.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Eastern Unit, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	0	17,252	17,252	0	-538	-538
Forest industry	0	5,085	5,085	0	0	0
Other private	5,871	187,471	193,341	-3,644	-80,559	-84,203
All classes	5,871	209,808	215,679	-3,644	-81,098	-84,742

NORTHERN CUMBERLAND UNIT TABLES

Table 72.--Area of timberland by forest type, forest-type group, and stand-size class, Northern Cumberland Unit, Kentucky, 1975

(In thousands of acres)

Forest type	*Stand-size class*				*All classes*
	Saw-timber	*Pole-timber*	*Sapling and seedling*	*Non-stocked*	
Shortleaf pine	*.0*	*12.0*	*24.9*	*.0*	*36.9*
Virginia pine	*12.0*	*12.0*	*49.4*	*.0*	*73.5*
Pitch pine	*11.7*	*.0*	*.0*	*.0*	*11.7*
Loblolly/shortleaf group	*23.8*	*24.1*	*74.3*	*.0*	*122.2*
Shortleaf pine/oak	*.0*	*12.0*	*12.0*	*.0*	*24.1*
Virginia pine/oak	*23.8*	*11.7*	*71.7*	*.0*	*107.2*
Other oak/pine	*.0*	*.0*	*23.8*	*.0*	*23.8*
Oak/pine group	*23.8*	*23.8*	*107.5*	*.0*	*155.1*
Post, black, or bear oak	*.0*	*11.9*	*23.8*	*.0*	*35.7*
Chestnut oak	*11.7*	*12.0*	*24.1*	*.0*	*47.9*
White oak/red oak/hickory	*71.1*	*71.5*	*71.8*	*.0*	*214.4*
White oak	*23.8*	*47.3*	*23.6*	*.0*	*94.7*
Y. poplar/wh. oak/no. red oak	*11.7*	*12.0*	*11.9*	*.0*	*35.7*
Yellow-poplar	*12.0*	*12.0*	*71.9*	*.0*	*96.0*
Hawthorn/reverting field	*.0*	*.0*	*11.8*	*.0*	*11.8*
Scarlet oak	*11.7*	*12.0*	*.0*	*.0*	*23.8*
Sassafras/persimmon	*.0*	*.0*	*11.8*	*.0*	*11.8*
Mixed central hardwoods	*461.4*	*274.8*	*168.0*	*.0*	*904.3*
Oak/hickory group	*603.6*	*453.7*	*418.7*	*.0*	*1,476.0*
Black ash/Amer. elm/red maple	*11.7*	*.0*	*12.0*	*.0*	*23.8*
Willow	*.0*	*11.9*	*11.9*	*.0*	*23.8*
Elm/ash/red maple group	*11.7*	*11.9*	*23.9*	*.0*	*47.6*
Sugar maple/beech/yellow birch	*23.8*	*.0*	*11.8*	*.0*	*35.6*
Red maple/northern hardwoods	*12.0*	*.0*	*.0*	*.0*	*12.0*
Northern hardwoods group	*35.8*	*.0*	*11.8*	*.0*	*47.6*
All forest types	*698.7*	*513.4*	*636.3*	*.0*	*1,848.4*

Table 73.--Area of timberland by forest type, forest-type group, and stand-size class, Northern Cumberland Unit, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Red pine	.0	.0	6.5	.0	6.5	100.0
Hemlock	9.9	.0	.0	.0	9.9	74.2
White/red pine group	9.9	.0	6.5	.0	16.4	59.8
Shortleaf pine	.0	7.5	.0	.0	7.5	70.7
Virginia pine	18.5	16.7	7.7	.0	42.9	36.4
Pitch pine	11.3	9.3	.0	.0	20.6	49.8
Loblolly/shortleaf group	29.8	33.5	7.7	.0	70.9	27.3
Shortleaf pine/oak	.0	8.5	6.5	.0	15.0	71.3
Virginia pine/oak	28.3	46.0	.0	.0	74.3	29.6
Other oak/pine	.0	5.1	5.8	.0	10.9	70.9
Oak/pine group	28.3	59.6	12.3	.0	100.2	25.5
Post, black, or bear oak	27.5	.0	5.8	.0	33.3	45.4
Chestnut oak	77.2	5.9	16.2	.0	99.3	25.2
White oak/red oak/hickory	97.3	87.0	38.3	.0	222.7	15.4
White oak	80.3	18.9	19.3	.0	118.5	23.6
Y. poplar/wh. oak/no. red oak	47.4	25.5	11.3	.0	84.2	27.8
Black locust	.0	5.8	23.4	.0	29.2	51.0
Sweetgum/yellow-poplar	.0	6.5	3.7	.0	10.2	73.5
Yellow-poplar	40.9	37.4	4.0	.0	82.3	27.3
Hawthorn/reverting field	.0	.0	6.7	.0	6.7	100.0
Scarlet oak	12.5	23.0	5.1	.0	40.6	38.9
Mixed central hardwoods	597.9	229.2	59.8	.0	886.9	6.3
Oak/hickory group	981.0	439.3	193.6	.0	1,613.9	3.0
Black ash/Amer. elm/red maple	6.6	.0	.0	.0	6.6	100.0
River birch/sycamore	7.9	.0	7.2	.0	15.1	70.8
Sycamore/pecan/American elm	.0	.0	4.7	.0	4.7	100.0
Elm/ash/red maple group	14.5	.0	11.9	.0	26.4	50.8
Sugar maple/beech/yellow birch	17.0	5.8	.0	.0	22.8	49.9
Northern hardwoods group	17.0	5.8	.0	.0	22.8	49.9
All forest types	1,080.6	538.2	231.9	.0	1,850.7	1.9
SE	5.4	9.2	16.0	.0	1.9	

Table 74.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Northern Cumberland Unit, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9
Eastern redcedar	1,189	0	306	56	130	65	0
Hard pines	12,348	9,682	7,153	7,920	3,654	2,157	820
Other softwoods	4,875	2,322	475	346	167	172	96
Total softwoods	18,411	12,004	7,935	8,323	3,952	2,394	916
Red maple	136,584	15,211	9,693	4,903	1,682	891	411
Sugar maple	25,070	3,893	1,733	1,720	685	361	276
Hickory	43,742	18,647	13,348	8,941	5,542	2,833	1,233
Beech	22,870	5,573	1,928	647	516	359	299
Ash	8,723	1,967	1,703	940	386	254	268
Black walnut	1,178	0	197	163	166	177	49
Sweetgum	0	998	145	146	0	32	62
Yellow-poplar	23,617	13,540	5,571	4,470	3,022	2,329	1,919
Blackgum	75,415	13,365	3,515	902	336	214	185
Select white oaks	14,336	5,344	8,371	6,793	4,947	4,160	2,853
Select red oaks	11,819	1,158	753	589	561	525	291
Other white oaks	20,414	3,652	4,919	5,983	3,949	3,124	2,179
Other red oaks	12,465	2,392	5,061	5,544	4,128	3,828	3,757
Basswood	0	1,034	338	69	131	195	87
Other hardwoods	185,143	40,208	12,654	4,747	1,693	1,115	319
Total hardwoods	581,376	126,982	69,930	46,558	27,745	20,396	14,186
All species	599,787	138,986	77,865	54,880	31,697	22,789	15,102
SE	6.7	10.7	5.8	5.3	5.0	5.2	5.4

Table 74.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height) 15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	All classes	SE
Eastern redcedar	0	0	0	0	0	1,747	70.8
Hard pines	371	55	34	0	0	44,194	17.6
Other softwoods	157	7	35	43	0	8,697	42.0
Total softwoods	528	62	69	43	0	54,637	15.9
Red maple	250	87	49	34	2	169,797	13.5
Sugar maple	89	161	65	59	0	34,112	25.2
Hickory	547	130	74	63	6	95,107	12.2
Beech	138	162	248	251	33	33,023	22.7
Ash	141	79	20	7	6	14,493	30.1
Black walnut	26	29	18	0	0	2,003	63.9
Sweetgum	0	0	0	0	0	1,383	73.9
Yellow-poplar	1,461	740	388	278	13	57,346	15.3
Blackgum	27	66	12	19	5	94,063	14.5
Select white oaks	1,956	1,027	485	340	50	50,662	13.9
Select red oaks	421	237	179	277	11	16,820	41.6
Other white oaks	1,347	787	374	396	36	47,159	17.8
Other red oaks	2,026	1,035	577	679	44	41,537	13.4
Basswood	40	0	0	17	0	1,911	59.5
Other hardwoods	289	87	101	108	0	246,466	9.3
Total hardwoods	8,758	4,628	2,591	2,527	206	905,883	4.8
All species	9,286	4,690	2,660	2,571	206	960,520	4.7
SE	5.4	7.4	9.3	9.7	21.4	4.7	

Table 75.--Net dry weight of all live trees on timberland by species and diameter class, Northern Cumberland Unit, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Eastern redcedar	3	18	9	30	21	0	0	0	0	0	81	55.9
Hard pines	392	511	1,095	895	775	434	254	56	44	0	4,455	14.5
Other softwoods	80	26	43	39	57	46	113	6	39	76	526	39.6
Total softwoods	474	555	1,148	965	853	480	366	63	83	76	5,062	13.3
Red maple	1,085	871	824	513	424	268	258	117	85	118	4,564	9.4
Sugar maple	309	225	465	300	233	260	119	251	129	228	2,519	19.3
Hickory	922	1,379	1,963	2,135	1,828	1,160	762	308	170	249	10,875	7.7
Beech	514	254	181	212	252	294	184	230	483	937	3,541	15.7
Ash	124	201	184	141	137	208	132	107	47	52	1,333	18.1
Black walnut	16	19	32	44	76	36	19	35	28	11	317	25.5
Sweetgum	23	7	34	0	17	48	0	0	0	0	129	60.5
Yellow-poplar	496	378	628	760	951	1,112	1,181	817	559	701	7,584	10.1
Blackgum	787	330	186	105	123	128	29	84	17	70	1,859	12.4
Select white oaks	218	636	1,161	1,552	2,336	2,261	2,169	1,599	1,000	1,618	14,551	8.6
Select red oaks	89	66	125	208	326	260	550	446	430	1,217	3,717	12.6
Other white oaks	228	477	1,201	1,384	1,819	1,865	1,584	1,292	756	1,552	12,160	9.6
Other red oaks	139	504	1,113	1,452	2,095	2,951	2,263	1,525	1,131	2,502	15,677	7.5
Basswood	33	19	19	43	95	69	38	5	0	54	375	33.5
Other commercial hardwoods	1,995	1,233	909	624	577	259	325	145	167	281	6,516	12.8
Noncommercial hardwoods	1,677	387	168	43	6	80	0	32	0	0	2,392	12.7
Total hardwoods	8,657	6,986	9,194	9,517	11,295	11,261	9,614	6,991	5,005	9,590	88,111	3.2
All species	9,131	7,541	10,342	10,481	12,148	11,741	9,980	7,054	5,088	9,666	93,173	2.9
SE	7.0	5.5	5.2	5.0	5.2	5.5	5.5	7.3	8.8	9.4	2.9	

Table 76.--Net dry weight[a] of all trees on timberland by class of material and species group, Northern Cumberland Unit, Kentucky, 1988

(In thousands of tons)

Class of material	Species group		All groups	SE
	Softwoods	Hardwoods		
Sawtimber trees:				
Sawlog portion	1,893	31,704	33,597	4.1
Upper stem	272	7,164	7,437	3.9
Total sawtimber trees	2,165	38,868	41,033	4.0
Poletimber trees	1,143	17,321	18,465	3.9
All growing stock	3,309	56,189	59,498	3.1
Rough cull trees[b]	10	1,338	1,348	12.6
Rotten cull trees[b]	2	1,366	1,368	13.3
Salvable dead trees[c]	94	1,284	1,378	13.7
Saplings[c]	474	8,657	9,131	7.0
Tops - growing stock	1,263	19,634	20,896	3.0
Tops - rough and rotten	5	926	931	8.6
All nongrowing stock	1,848	33,205	35,053	3.0
All classes	5,156	89,394	94,551	2.9
SE	13.3	3.2	2.9	

[a] Includes bark and sound cull; excludes rotten cull.

[b] Bole portion of trees 5.0 inches d.b.h. and larger.

[c] Includes entire tree aboveground.

Table 77.--Net volume of all trees on timberland by class of timber and species group, Northern Cumberland Unit, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	100.9	15.5	320.8	966.8	1,404.0	4.0
Upper stem	15.1	1.8	74.2	222.7	313.7	3.9
Total sawtimber trees	116.0	17.3	395.0	1,189.5	1,717.7	4.0
Poletimber trees	75.2	2.4	261.9	553.6	893.1	4.1
Total growing-stock trees	191.2	19.7	657.0	1,743.0	2,610.9	3.1
Rough trees:						
Sawtimber size	.1	.0	2.6	18.6	21.3	19.3
Poletimber size	.2	.0	1.5	16.7	18.4	13.8
Total rough trees	.3	.0	4.1	35.3	39.7	11.9
Rotten trees:						
Sawtimber size	.1	.0	4.7	24.9	29.7	13.7
Poletimber size	.0	.0	2.0	2.7	4.7	23.3
Total rotten trees	.1	.0	6.7	27.6	34.4	12.4
Salvable dead[a] trees:						
Sawtimber size	2.1	.0	3.5	13.8	19.4	18.2
Poletimber size	2.2	.0	2.1	14.7	19.0	18.8
Total salvable dead trees	4.3	.0	5.6	28.5	38.5	13.8
All classes	195.9	19.7	673.4	1,834.4	2,723.4	3.1
SE	15.4	42.5	7.8	4.0	3.1	

[a] Includes noncommercial species.

Table 78.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Northern Cumberland Unit, Kentucky, 1988

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
			All live		
			(In millions of cubic feet)		
Softwoods	17.5	29.2	.7	163.8	211.3
Hardwoods	196.9	18.1	103.1	2,155.7	2,473.7
Total all live	214.4	47.3	103.8	2,319.5	2,685.0
			Growing stock		
			(In millions of cubic feet)		
Softwoods	17.5	28.6	.7	164.0	210.9
Hardwoods	190.9	17.9	102.0	2,089.2	2,400.0
Total growing stock	208.4	46.6	102.7	2,253.2	2,610.9
			Sawtimber		
			(In millions of board feet)		
Softwoods	59.4	34.9	3.0	378.3	475.6
Hardwoods	643.7	35.4	279.8	5,707.2	6,666.1
Total sawtimber	703.1	70.3	282.8	6,085.5	7,141.7

Table 79.--Net volume of growing-stock trees on timberland by species and diameter class, Northern Cumberland Unit, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	.5	.8	.0	.0	.0	.0	.0	.0	.0	.0	1.3
Hard pines	32.2	38.9	50.9	28.2	18.5	9.5	1.6	.0	.0	.0	179.8
Other softwoods	1.4	1.7	7.2	4.1	1.9	4.7	1.2	3.6	.0	.9	26.7
Total softwoods	34.0	41.4	58.2	32.3	20.4	14.2	2.8	3.6	.0	.9	207.8
Red maple	9.0	4.5	8.7	3.4	2.5	3.0	1.0	1.3	.6	.0	33.9
Sugar maple	7.7	6.4	5.4	7.0	1.4	6.9	.0	2.4	2.3	.0	39.5
Hickory	46.5	51.3	52.4	28.6	29.0	11.3	4.4	5.5	7.8	.0	236.8
Beech	2.8	7.3	7.9	5.9	7.9	5.9	6.0	12.2	30.1	5.6	91.7
Ash	2.4	8.0	3.7	6.2	5.7	7.9	2.1	.0	3.3	.0	39.4
Black walnut	.0	.8	3.8	2.4	1.3	4.6	.0	.0	.0	.0	12.9
Sweetgum	.0	.0	3.1	3.0	1.5	.0	.0	.0	.0	.0	7.7
Yellow-poplar	18.1	28.0	42.2	40.6	31.3	30.2	15.0	16.5	9.2	.0	231.2
Blackgum	2.3	7.6	3.7	4.2	5.7	2.6	1.9	.0	.0	.0	27.9
Select white oaks	32.7	42.7	58.5	65.4	54.9	33.3	15.9	6.9	10.4	.0	320.7
Select red oaks	4.6	4.6	9.5	3.9	13.3	14.7	7.1	7.6	18.4	.0	83.7
Other white oaks	18.0	30.7	45.1	44.7	38.6	24.3	14.3	13.9	13.6	5.1	248.4
Other red oaks	27.5	50.2	51.2	57.9	67.2	58.5	28.1	19.4	21.0	3.7	384.7
Basswood	.9	.0	3.4	1.4	2.6	.0	1.5	.0	1.7	.0	11.5
Other hardwoods	25.9	21.6	16.0	10.0	11.4	6.6	4.3	1.2	1.1	.0	98.1
Total hardwoods	198.5	263.6	314.6	284.6	274.4	209.7	101.5	87.0	119.6	14.5	1,867.9
All species	232.6	305.0	372.7	316.9	294.7	223.9	104.4	90.6	119.6	15.3	2,075.7

Table 80.--Net volume of growing-stock trees on timberland by species and diameter class, Northern Cumberland Unit, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	.5	.4	1.1	.7	.0	.0	.0	.0	.0	.0	2.7	56.9
Hard pines	21.3	52.0	42.0	36.3	19.2	10.8	2.0	1.6	.0	.0	185.2	15.9
Other softwoods	1.2	2.2	2.0	3.0	2.5	5.9	.3	2.1	3.7	.0	23.0	37.6
Total softwoods	23.1	54.6	45.1	40.0	21.7	16.7	2.3	3.7	3.7	.0	210.9	14.4
Red maple	25.6	32.2	20.9	15.6	10.1	8.7	3.5	2.5	2.2	.3	121.6	11.0
Sugar maple	5.2	12.6	7.7	6.5	7.1	3.2	6.5	3.8	4.0	.0	56.7	23.9
Hickory	36.0	60.3	67.9	53.4	31.7	19.5	6.1	3.8	4.6	.7	284.0	8.1
Beech	2.7	3.5	5.0	6.5	7.7	5.1	6.9	13.4	22.0	4.4	77.2	18.4
Ash	4.4	5.8	4.6	4.8	7.1	4.3	3.6	1.1	.6	1.1	37.4	19.0
Black walnut	.6	1.2	1.6	2.7	1.2	.7	1.5	.9	.0	.0	10.4	26.0
Sweetgum	.2	1.2	.0	.6	1.6	.0	.0	.0	.0	.0	3.7	71.4
Yellow-poplar	15.9	33.8	43.8	53.0	60.6	62.6	42.5	28.7	26.1	2.2	369.2	10.8
Blackgum	9.2	5.6	3.4	3.7	4.1	.9	2.1	.5	1.0	.9	31.3	16.8
Select white oaks	21.7	44.0	54.5	71.9	69.5	63.2	41.7	24.1	25.0	5.3	420.8	9.2
Select red oaks	1.9	4.1	6.5	9.8	6.8	14.4	11.6	10.0	19.5	1.6	86.1	13.0
Other white oaks	12.4	35.6	41.1	50.5	47.5	37.8	28.4	18.2	25.5	3.3	300.2	9.8
Other red oaks	14.6	38.6	49.4	67.4	92.9	66.4	45.1	30.9	50.3	4.9	460.6	7.7
Basswood	.6	.5	1.5	2.9	2.3	1.4	.0	.0	1.1	.0	10.3	36.5
Other hardwoods	31.4	28.1	18.1	18.4	7.5	10.9	3.6	5.2	7.4	.0	130.5	19.0
Total hardwoods	182.4	307.2	325.9	367.7	357.8	299.0	203.0	143.2	189.1	24.7	2,400.0	3.5
All species	205.4	361.8	371.0	407.7	379.5	315.8	205.3	146.9	192.8	24.7	2,610.9	3.1
SE	5.8	5.5	5.3	5.2	5.5	5.6	7.7	9.8	10.1	21.4	3.1	

Table 81.--Net volume of sawtimber trees on timberland by species and diameter class, Northern Cumberland Unit, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Hard pines	137.5	88.9	61.9	34.5	6.2	.0	.0	.0	328.9
Other softwoods[a]	28.2	17.5	8.6	22.7	6.0	18.0	.0	3.5	104.4
Total softwoods	165.7	106.4	70.5	57.2	12.2	18.0	.0	3.5	433.3
Red maple	-	10.3	8.2	10.5	3.5	4.3	2.2	.0	38.9
Sugar maple	-	27.7	5.1	26.7	.0	12.4	10.6	.0	82.6
Hickory	-	87.2	96.6	37.2	13.5	20.1	33.7	.0	288.3
Beech	-	22.4	37.2	28.5	28.8	61.7	167.9	30.5	376.9
Ash	-	20.3	18.0	27.9	7.9	.0	13.1	.0	87.2
Black walnut	-	7.8	5.2	17.6	.0	.0	.0	.0	30.6
Sweetgum	-	11.6	5.5	.0	.0	.0	.0	.0	17.1
Yellow-poplar	-	158.6	127.6	136.4	68.1	75.2	41.5	.0	607.3
Blackgum	-	13.3	18.2	8.8	4.6	.0	.0	.0	44.9
Select white oaks	-	254.4	225.1	143.6	68.7	31.3	49.1	.0	772.2
Select red oaks	-	17.7	60.4	69.4	33.5	35.3	97.2	.0	313.5
Other white oaks	-	151.7	130.1	85.7	53.7	51.1	49.0	20.4	541.7
Other red oaks	-	196.6	244.0	224.3	115.7	79.5	86.4	14.2	960.6
Basswood	-	4.6	8.5	.0	5.3	.0	5.9	.0	24.3
Other hardwoods	-	30.6	34.6	20.3	14.0	3.9	4.7	.0	108.1
Total hardwoods	-	1,014.7	1,024.3	836.8	417.2	374.9	561.3	65.1	4,294.3
All species	165.7	1,121.1	1,094.8	894.1	429.4	392.8	561.3	68.6	4,727.7

[a] Includes Eastern redcedar.

Table 82.--Net volume of sawtimber trees on timberland by species and diameter class, Northern Cumberland Unit, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	3.0	2.1	.0	.0	.0	.0	.0	.0	5.1	68.8
Hard pines	128.0	126.6	76.5	46.8	7.6	6.9	.0	.0	392.4	17.0
Other softwoods	5.5	9.6	9.9	25.0	1.6	10.1	16.4	.0	78.1	41.2
Total softwoods	136.6	138.3	86.4	71.7	9.2	17.0	16.4	.0	475.6	15.4
Red maple	-	54.6	38.6	36.1	13.5	11.1	10.6	.9	165.4	17.2
Sugar maple	-	23.4	31.6	14.8	30.9	19.7	19.0	.0	139.3	35.0
Hickory	-	191.2	128.2	86.2	28.8	17.3	23.0	4.0	478.7	10.7
Beech	-	22.0	30.5	22.3	33.4	67.8	117.4	25.3	318.6	20.9
Ash	-	17.9	27.8	18.3	15.4	4.6	2.7	6.9	93.6	27.9
Black walnut	-	9.8	5.0	3.0	7.3	4.4	.0	.0	29.6	32.0
Sweetgum	-	2.4	6.5	.0	.0	.0	.0	.0	8.8	78.0
Yellow-poplar	-	180.6	249.7	283.6	205.2	146.7	140.8	14.0	1,220.6	12.4
Blackgum	-	12.1	16.1	3.6	9.3	2.4	5.0	5.3	53.8	24.7
Select white oaks	-	255.6	281.9	281.0	195.2	112.2	128.9	26.9	1,281.8	10.3
Select red oaks	-	31.8	26.8	57.4	52.3	47.0	93.7	10.1	319.2	13.8
Other white oaks	-	169.2	180.7	146.4	114.8	81.3	115.3	15.4	823.0	11.5
Other red oaks	-	229.2	356.5	277.8	198.8	144.1	249.6	27.7	1,483.7	8.5
Basswood	-	10.4	9.2	6.4	.0	.0	6.2	.0	32.1	38.0
Other hardwoods	-	63.1	29.3	45.9	17.7	24.1	37.8	.0	218.0	28.1
Total hardwoods	-	1,273.2	1,418.3	1,282.8	922.4	682.8	950.1	136.5	6,666.1	4.6
All species	136.6	1,411.5	1,504.6	1,354.6	931.6	699.8	966.5	136.5	7,141.7	4.3
SE	20.3	5.2	5.5	5.7	8.0	10.1	10.4	22.0	4.3	

Table 83.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Northern Cumberland Unit, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Hard pines	.0	.0	40.7	-	40.7	5.4	20.7	302.9	-	328.9
Other softwoods	26.6	10.3	8.7	4.5	50.1	62.3	17.6	17.7	6.9	104.4
Total softwoods	26.6	10.3	49.4	4.5	90.8	67.6	38.3	320.5	6.9	433.3
Red maple	.0	3.8	13.5	3.1	20.4	.0	3.8	27.9	7.2	38.9
Sugar maple	.0	.9	26.8	22.0	49.7	.0	1.6	45.4	35.6	82.6
Hickory	11.3	31.4	42.0	19.8	104.5	11.3	37.0	172.3	67.8	288.3
Beech	1.2	6.3	190.4	119.4	317.4	1.4	6.3	216.5	152.7	376.9
Ash	5.0	19.5	19.1	5.3	48.9	5.0	26.0	44.4	11.8	87.2
Black walnut	.0	5.5	10.9	1.2	17.6	.0	9.0	18.8	2.8	30.6
Sweetgum	.0	.0	.0	.0	.0	.0	.0	7.9	9.1	17.1
Yellow-poplar	24.6	61.2	160.7	74.6	321.2	24.6	72.3	346.9	163.5	607.3
Blackgum	.0	.0	12.1	1.4	13.5	.0	.0	38.5	6.4	44.9
Select white oaks	20.6	67.5	132.0	72.6	292.6	20.6	85.3	430.5	235.8	772.2
Select red oaks	21.7	76.0	104.2	33.6	235.5	21.7	78.8	156.3	56.8	313.5
Other white oaks	10.0	54.6	139.4	55.9	259.9	10.0	60.1	349.0	122.6	541.7
Other red oaks	4.9	74.6	263.3	177.3	520.1	4.9	88.3	497.3	370.1	960.6
Basswood	.0	3.6	6.8	.7	11.1	.0	3.6	16.0	4.7	24.3
Other hardwoods	3.6	10.7	21.8	6.8	42.9	3.9	16.5	67.9	19.8	108.1
Total hardwoods	102.9	415.7	1,143.0	593.7	2,255.3	103.4	488.6	2,435.8	1,266.6	4,294.3
Percent of hardwood in each grade	5	18	51	26	100	2	11	57	30	100

Table 84.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Northern Cumberland Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	.0	-	-	-	.0	5.1	-	-	-	5.1
Hard pines	8.8	6.7	45.7	-	61.2	31.7	39.0	321.7	-	392.4
Other softwoods	42.2	1.4	7.2	2.3	53.1	61.5	4.0	9.5	3.2	78.1
Total softwoods	51.1	8.1	52.9	2.3	114.3	98.2	43.0	331.2	3.2	475.6
Red maple	1.6	23.7	37.8	9.1	72.3	1.6	31.7	101.1	31.0	165.4
Sugar maple	12.7	25.9	31.3	14.5	84.4	15.9	40.3	58.1	25.0	139.3
Hickory	23.0	54.1	52.4	29.9	159.3	23.0	132.6	221.2	101.9	478.7
Beech	15.2	23.6	143.9	83.3	266.1	15.5	25.8	163.4	113.9	318.6
Ash	3.7	15.1	18.7	10.4	47.9	6.0	32.0	39.4	16.2	93.6
Black walnut	4.5	3.6	6.2	.5	14.8	4.5	6.0	16.6	2.5	29.6
Sweetgum	.0	.0	.0	.0	.0	.0	3.5	3.2	2.2	8.8
Yellow-poplar	237.1	195.9	230.7	126.6	790.3	238.6	300.6	436.7	244.7	1,220.6
Blackgum	3.3	3.6	13.0	5.9	25.7	3.3	7.8	34.3	8.5	53.8
Select white oaks	144.4	149.0	222.6	228.2	744.2	157.6	252.9	490.3	381.0	1,281.8
Select red oaks	69.0	67.0	88.4	36.2	260.6	69.0	73.0	129.8	47.3	319.2
Other white oaks	80.6	125.9	163.8	102.9	473.2	82.1	204.7	368.6	167.5	823.0
Other red oaks	163.9	214.3	293.4	226.4	898.0	165.1	312.5	560.2	445.9	1,483.7
Basswood	5.2	2.4	4.3	.7	12.5	6.9	7.1	16.4	1.8	32.1
Other hardwoods	35.8	30.1	49.3	10.3	125.6	39.5	38.2	110.1	30.2	218.0
Total hardwoods	800.0	934.1	1,355.8	884.8	3,974.7	828.6	1,468.8	2,749.1	1,619.6	6,666.1
Percent of hardwood in each grade	20	24	34	22	100	13	22	41	24	100

Table 85.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Northern Cumberland Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Eastern redcedar	.0	-	-	-	.0	.0	4.4	-	-	-	.7	5.1
Hard pines	16.6	11.3	30.1	-	3.2	61.2	59.7	69.9	254.2	-	8.4	392.4
Other softwoods	38.6	2.7	8.2	.0	3.6	53.1	54.6	7.8	8.4	.5	6.9	78.1
Total softwoods	55.3	14.0	38.2	.0	6.8	114.3	118.7	77.7	262.6	.5	16.0	475.6
Red maple	.0	33.0	11.6	5.8	21.9	72.3	.0	39.0	75.8	17.9	32.7	165.4
Sugar maple	7.7	37.8	24.3	7.2	7.5	84.4	7.7	55.8	50.2	12.1	13.5	139.3
Hickory	38.3	60.7	33.7	7.4	19.2	159.3	38.3	170.4	208.7	33.4	27.9	478.7
Beech	15.0	32.6	69.4	59.3	89.8	266.1	15.0	36.2	81.2	87.8	98.3	318.6
Ash	3.1	5.2	17.7	6.9	15.0	47.9	3.1	22.5	36.6	7.6	23.9	93.6
Black walnut	7.3	3.0	.0	.0	4.4	14.8	7.3	3.0	14.8	.0	4.4	29.6
Sweetgum	.0	.0	.0	.0	.0	.0	.0	6.5	2.4	.0	.0	8.8
Yellow-poplar	362.2	202.4	129.0	39.2	57.5	790.3	362.2	373.3	323.4	96.9	64.8	1,220.6
Blackgum	5.3	3.6	1.9	5.3	9.6	25.7	5.3	8.7	16.9	5.3	17.6	53.8
Select white oaks	148.8	212.4	228.3	50.1	104.5	744.2	148.8	355.5	546.7	112.5	118.2	1,281.8
Select red oaks	86.5	60.4	78.2	12.8	22.6	260.6	86.5	69.4	121.4	19.3	22.6	319.2
Other white oaks	95.4	157.2	145.5	24.8	50.3	473.2	95.4	244.9	379.9	43.2	59.6	823.0
Other red oaks	243.6	256.7	252.6	83.6	61.6	898.0	243.6	387.2	589.0	186.0	77.8	1,483.7
Basswood	7.0	3.4	2.1	.0	.0	12.5	7.0	13.0	12.1	.0	.0	32.1
Other hardwoods	36.8	31.6	41.7	.0	15.5	125.6	36.8	46.1	102.1	10.2	22.8	218.0
Total hardwoods	1,056.7	1,100.1	1,036.0	302.3	479.6	3,974.7	1,056.7	1,831.7	2,561.1	632.1	584.5	6,666.1
All species	1,112.0	1,114.1	1,074.3	302.3	486.3	4,089.0	1,175.4	1,909.4	2,823.7	632.6	600.5	7,141.7

Table 86.--Average annual net change of growing-stock volume on timberland by species and component of change, Northern Cumberland Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Eastern redcedar	38	71	108	0	0	108	0	108
Hard pines	1,573	4,745	6,317	-2,992	0	3,325	-2,916	408
Other softwoods	130	564	694	0	0	694	-976	-282
Total softwoods	1,740	5,379	7,119	-2,992	0	4,127	-3,893	234
Red maple	2,837	5,121	7,959	-340	0	7,619	-929	6,690
Sugar maple	237	1,475	1,711	0	-95	1,616	-305	1,311
Hickory	900	6,761	7,661	-2,800	-184	4,677	-1,078	3,598
Beech	71	1,035	1,106	-843	-272	-9	-1,095	-1,104
Ash	136	599	735	-205	-70	460	-614	-154
Black walnut	0	155	155	-193	0	-38	-153	-191
Sweetgum	0	63	63	0	0	63	-368	-305
Yellow-poplar	1,533	12,806	14,339	-703	-61	13,574	-3,052	10,522
Blackgum	165	327	493	-87	-54	352	-93	260
Select white oaks	852	9,975	10,827	-818	-122	9,888	-2,263	7,625
Select red oaks	297	2,239	2,537	-757	-48	1,731	-1,543	189
Other white oaks	361	7,746	8,107	-1,758	-192	6,157	-2,201	3,955
Other red oaks	1,209	13,366	14,575	-4,689	-451	9,435	-3,649	5,786
Basswood	0	237	237	0	0	237	-329	-92
Other hardwoods	1,200	2,893	4,094	-1,109	-145	2,839	-367	2,472
Total hardwoods	9,799	64,800	74,599	-14,302	-1,696	58,601	-18,040	40,561
All species	11,539	70,180	81,719	-17,294	-1,696	62,728	-21,933	40,795

Table 87.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Northern Cumberland Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Eastern redcedar	108	0
Hard pines	3,325	-2,916
Other softwoods	694	-976
Total softwoods	4,127	-3,893
Red maple	7,619	-929
Sugar maple	1,616	-305
Hickory	4,677	-1,078
Beech	-9	-1,095
Ash	460	-614
Black walnut	-38	-153
Sweetgum	63	-368
Yellow-poplar	13,574	-3,052
Blackgum	352	-93
Select white oaks	9,888	-2,263
Select red oaks	1,731	-1,543
Other white oaks	6,157	-2,201
Other red oaks	9,435	-3,649
Basswood	237	-329
Other hardwoods	2,839	-367
Total hardwoods	58,601	-18,040
All species	62,728	-21,933

Table 88.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Northern Cumberland Unit, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Eastern redcedar	284	0
Hard pines	13,319	-8,482
Other softwoods	1,907	-3,806
Total softwoods	15,510	-12,288
Red maple	11,400	-1,754
Sugar maple	5,069	-747
Hickory	16,902	-2,387
Beech	-543	-3,906
Ash	2,106	-1,620
Black walnut	561	-639
Sweetgum	362	-990
Yellow-poplar	56,677	-9,925
Blackgum	678	0
Select white oaks	46,770	-7,923
Select red oaks	6,877	-6,448
Other white oaks	28,379	-6,939
Other red oaks	50,540	-10,664
Basswood	1,301	-704
Other hardwoods	8,866	-493
Total hardwoods	235,945	-55,138
All species	251,455	-67,426

Table 89.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Northern Cumberland Unit, Kentucky, 1974-87

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Hard pines	-2,992	-6,409
Total softwoods	-2,992	-6,409
Red maple	-340	-827
Hickory	-2,800	-3,098
Beech	-843	-4,347
Ash	-205	-415
Black walnut	-193	-542
Yellow-poplar	-703	-1,315
Blackgum	-87	0
Select white oaks	-818	-1,120
Select red oaks	-757	-3,445
Other white oaks	-1,758	-4,569
Other red oaks	-4,689	-11,257
Other hardwoods	-1,109	-746
Total hardwoods	-14,302	-31,682
All species	-17,294	-38,090

Table 90.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Northern Cumberland Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	77	5,056	5,132	-2,753	-2,563	-5,316
Forest industry	t	2,657	2,657	0	0	0
Other private	4,051	50,888	54,939	-1,140	-15,477	-16,617
All classes	4,127	58,601	62,728	-3,893	-18,040	-21,933

t Less than 1,000 cubic feet; included with Other private.

Table 91.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Northern Cumberland Unit, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	1,957	23,570	25,527	-8,072	-3,549	-11,621
Forest industry	t	10,637	10,637	0	0	0
Other private	13,553	201,738	215,291	-4,215	-51,589	-55,805
All classes.	15,510	235,945	251,455	-12,288	-55,138	-67,426

t Less than 1,000 board feet; included with Other private.

SOUTHERN CUMBERLAND UNIT TABLES

Table 92.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Cumberland Unit, Kentucky, 1975

(In thousands of acres)

Forest type	Stand-size class				All classes
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked	
Shortleaf pine	45.9	.0	71.8	.0	117.7
Virginia pine	69.3	4.7	21.5	.0	95.5
Eastern redcedar	.0	.0	12.3	.0	12.3
Pitch pine	36.1	.0	.0	.0	36.1
Loblolly/shortleaf group	151.3	4.7	105.5	.0	261.5
Shortleaf pine/oak	59.9	11.3	23.8	.0	95.1
Virginia pine/oak	59.9	36.0	24.2	.0	120.0
Other oak/pine	24.1	12.0	.0	.0	36.1
Oak/pine group	143.8	59.3	48.0	.0	251.2
Post, black, or bear oak	.0	11.9	.0	.0	11.9
Chestnut oak	12.0	23.9	33.8	.0	69.8
White oak/red oak/hickory	95.5	72.0	12.0	.0	179.5
White oak	11.3	11.9	23.9	.0	47.2
Y. poplar/wh. oak/no. red oak	12.0	23.9	47.7	.0	83.6
Black locust	.0	.0	10.0	.0	10.0
Yellow-poplar	23.9	12.0	47.7	.0	83.6
Hawthorn/reverting field	.0	.0	11.8	.0	11.8
Scarlet oak	47.8	12.0	.0	.0	59.8
Mixed central hardwoods	561.6	227.5	215.5	.0	1,004.6
Oak/hickory group	764.2	395.3	402.4	.0	1,561.9
Sweetgm/nuttall oak/willow oak	.0	11.9	.0	.0	11.9
Oak/gum/cypress group	.0	11.9	.0	.0	11.9
River birch/sycamore	.0	11.9	.0	.0	11.9
Elm/ash/red maple group	.0	11.9	.0	.0	11.9
Sugar maple/beech/yellow birch	34.4	23.8	.0	.0	58.3
Northern hardwoods group	34.4	23.8	.0	.0	58.3
All forest types	1,093.8	506.9	556.0	.0	2,156.7

Table 93.--Area of timberland by forest type, forest-type group, and stand-size class, Southern Cumberland Unit, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
White pine	.0	.0	13.1	.0	13.1	70.7
Hemlock	2.1	.0	.0	.0	2.1	100.0
Scotch pine	.0	.0	3.2	.0	3.2	100.0
White/red pine group	2.1	.0	16.3	.0	18.4	54.4
Shortleaf pine	41.7	20.9	17.3	.0	79.9	29.3
Virginia pine	50.9	24.7	18.8	.0	94.4	24.5
Eastern redcedar	.0	.0	6.7	.0	6.7	100.0
Pitch pine	22.4	11.0	.0	.0	33.5	51.6
Loblolly/shortleaf group	115.1	56.6	42.8	.0	214.5	17.1
Eastern redcedar/hardwood	.0	.0	9.1	.0	9.1	100.0
Shortleaf pine/oak	43.9	7.3	6.3	.0	57.6	31.4
Virginia pine/oak	38.0	22.7	7.2	.0	67.9	30.2
Other oak/pine	3.0	10.0	12.0	.0	25.0	49.8
Oak/pine group	84.9	40.0	34.6	.0	159.6	18.9
Post, black, or bear oak	17.0	5.9	.0	.0	22.9	60.0
Chestnut oak	89.6	39.0	7.1	.0	135.7	22.0
White oak/red oak/hickory	181.9	35.8	24.3	.0	242.0	16.1
White oak	43.6	4.4	.0	.0	48.0	35.4
Y. poplar/wh. oak/no. red oak	51.6	23.2	40.1	.0	114.8	24.7
Black locust	.0	2.7	15.5	.0	18.1	55.0
Sweetgum/yellow-poplar	.0	8.7	.0	.0	8.7	100.0
Yellow-poplar	93.9	32.6	28.8	.0	155.3	20.8
Hawthorn/reverting field	2.9	.0	6.6	.0	9.5	76.0
Scarlet oak	18.5	2.7	.0	.0	21.2	51.3
Red maple/central hardwoods	6.1	.0	.0	.0	6.1	100.0
Mixed central hardwoods	547.1	195.9	103.7	.0	846.6	7.0
Oak/hickory group	1,052.2	350.8	226.2	.0	1,629.2	3.3
Sweetgm/nuttall oak/willow oak	6.1	.0	.0	.0	6.1	100.0
Oak/gum/cypress group	6.1	.0	.0	.0	6.1	100.0
Black ash/Amer. elm/red maple	3.2	8.8	.0	.0	12.0	78.1
River birch/sycamore	20.8	6.5	.0	.0	27.4	50.7
Elm/ash/red maple group	24.0	15.3	.0	.0	39.4	36.5
Sugar maple/beech/yellow birch	64.2	.0	.0	.0	64.2	33.7
Pin cherry/reverting field	.0	2.7	.0	.0	2.7	100.0
Mixed northern hardwoods	16.9	5.9	.0	.0	22.8	53.1
Northern hardwoods group	81.1	8.6	.0	.0	89.7	27.1
All forest types	1,365.5	471.5	319.9	.0	2,156.8	1.2
SE	4.4	11.2	14.2	.0	1.2	

Table 94.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Southern Cumberland Unit, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9
Eastern redcedar	5,629	2,629	788	433	221	109	68
Hard pines	19,313	7,707	11,486	11,503	8,312	4,237	2,059
Other softwoods	19,159	10,610	2,313	1,112	505	440	202
Total softwoods	44,100	20,946	14,587	13,047	9,038	4,787	2,330
Red maple	171,424	34,929	12,756	5,375	2,666	1,236	492
Sugar maple	67,513	5,138	4,162	1,923	931	608	350
Hickory	32,023	11,611	10,902	7,704	4,185	3,481	1,797
Beech	18,293	5,389	1,016	1,145	962	663	481
Ash	16,828	9,410	2,302	986	580	293	155
Black walnut	0	0	188	459	298	211	126
Sweetgum	10,109	3,478	664	517	450	45	97
Yellow-poplar	24,169	22,365	9,336	7,350	5,747	3,818	3,693
Blackgum	32,043	13,486	3,806	1,187	375	349	323
Select white oaks	22,546	17,953	10,158	8,377	5,017	4,049	2,257
Select red oaks	5,815	1,349	1,782	1,711	1,192	682	701
Other white oaks	27,147	16,802	6,334	4,259	4,217	2,759	1,973
Other red oaks	8,362	2,432	4,678	4,502	3,488	2,467	2,341
Basswood	518	4,825	583	482	119	316	210
Other hardwoods	216,028	41,140	12,111	6,046	3,059	1,416	874
Total hardwoods	652,820	190,308	80,778	52,022	33,286	22,393	15,870
All species	696,920	211,254	95,365	65,070	42,324	27,180	18,200
SE	7.3	9.7	4.5	4.4	4.5	4.0	4.6

Table 94.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	18	0	23	0	0	9,918	58.9
Hard pines	811	328	75	33	0	65,865	15.4
Other softwoods	134	89	37	93	16	34,708	40.1
Total softwoods	963	417	135	126	16	110,491	16.0
Red maple	481	243	220	111	25	229,960	14.2
Sugar maple	270	233	72	89	12	81,301	20.4
Hickory	1,004	515	130	185	0	73,538	13.5
Beech	358	290	217	570	138	29,523	20.3
Ash	127	49	10	33	0	30,773	28.0
Black walnut	191	19	11	0	0	1,503	29.8
Sweetgum	44	28	14	10	0	15,458	37.8
Yellow-poplar	2,122	958	504	372	11	80,446	13.8
Blackgum	181	142	110	42	0	52,043	17.4
Select white oaks	1,391	1,036	424	339	17	73,566	11.7
Select red oaks	595	406	227	381	12	14,852	24.5
Other white oaks	1,277	998	381	661	59	66,868	15.7
Other red oaks	1,971	1,223	742	621	13	32,842	16.1
Basswood	234	44	27	45	7	7,409	53.0
Other hardwoods	517	204	143	112	12	281,663	10.8
Total hardwoods	10,764	6,391	3,232	3,574	307	1,071,745	5.3
All species	11,727	6,808	3,367	3,699	323	1,182,237	5.1
SE	5.4	7.0	7.8	8.6	24.0	5.1	

Table 95.--Net dry weight of all live trees on timberland by species and diameter class, Southern Cumberland Unit, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Eastern redcedar	70	71	55	50	39	53	15	0	27	0	381	54.9
Hard pines	314	854	1,611	1,893	1,482	1,031	490	289	86	44	8,095	12.1
Other softwoods	302	153	137	108	158	99	93	75	43	196	1,364	21.0
Total softwoods	686	1,077	1,804	2,052	1,680	1,182	599	365	156	240	9,841	10.4
Red maple	1,983	1,130	991	825	601	404	502	331	373	460	7,600	9.4
Sugar maple	532	524	480	451	412	394	297	415	157	407	4,070	15.8
Hickory	686	1,130	1,631	1,681	2,209	1,683	1,285	906	319	654	12,183	8.3
Beech	447	135	302	411	411	418	426	475	417	2,681	6,123	19.0
Ash	396	273	217	206	176	131	123	64	16	83	1,687	16.0
Black walnut	0	18	104	87	119	95	158	18	17	0	617	31.1
Sweetgum	165	54	98	156	32	96	51	39	25	25	742	28.0
Yellow-poplar	670	675	1,059	1,479	1,553	2,221	1,743	1,053	714	833	12,000	8.9
Blackgum	641	405	221	128	191	237	181	179	199	87	2,470	13.5
Select white oaks	557	836	1,499	1,617	2,208	1,810	1,600	1,550	906	1,290	13,874	7.3
Select red oaks	75	198	367	498	428	691	783	719	525	1,419	5,703	11.4
Other white oaks	633	613	827	1,510	1,562	1,713	1,521	1,577	938	2,606	13,500	11.0
Other red oaks	151	476	883	1,198	1,409	1,855	2,118	1,736	1,433	1,819	13,077	9.6
Basswood	165	50	81	58	157	142	242	65	44	170	1,175	25.6
Other commercial hardwoods	2,435	1,284	1,246	1,001	758	765	542	294	252	455	9,031	9.2
Noncommercial hardwoods	1,526	459	289	176	37	38	23	0	7	41	2,594	12.0
Total hardwoods	11,063	8,261	10,295	11,482	12,263	12,692	11,594	9,421	6,343	13,030	106,445	2.6
All species	11,749	9,339	12,100	13,534	13,943	13,874	12,193	9,786	6,498	13,270	116,286	2.2
SE	7.3	4.3	4.0	4.3	4.0	4.6	5.2	7.0	7.6	8.8	2.2	

Table 96.--Net dry weight[a] of all trees on timberland by class of material and species group, Southern Cumberland Unit, Kentucky, 1988

(In thousands of tons)

Class of material	Species group: Softwoods	Species group: Hardwoods	All groups	SE
Sawtimber trees:				
Sawlog portion	4,035	38,442	42,477	3.6
Upper stem	571	8,478	9,049	3.4
Total sawtimber trees	4,605	46,920	51,525	3.5
Poletimber trees	1,906	19,521	21,427	3.3
All growing stock	6,511	66,441	72,953	2.6
Rough cull trees[b]	155	2,452	2,607	8.5
Rotten cull trees[b]	9	1,929	1,938	10.8
Salvable dead trees[c]	227	1,628	1,854	11.5
Saplings[c]	686	11,063	11,749	7.3
Tops - growing stock	2,420	23,005	25,425	2.4
Tops - rough and rotten	59	1,555	1,614	6.7
All nongrowing stock	3,557	41,631	45,188	2.3
All classes	10,068	108,073	118,140	2.2
SE	10.3	2.6	2.2	

[a] Includes bark and sound cull; excludes rotten cull.

[b] Bole portion of trees 5.0 inches d.b.h. and larger.

[c] Includes entire tree aboveground.

Table 97.--Net volume of all trees on timberland by class of timber and species group, Southern Cumberland Unit, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	217.9	31.1	473.8	983.8	1,706.6	3.6
Upper stem	31.8	3.6	109.2	219.6	364.2	3.4
Total sawtimber trees	249.7	34.7	583.0	1,203.4	2,070.9	3.5
Poletimber trees	110.5	12.1	339.3	482.8	944.7	3.4
Total growing-stock trees	360.2	46.8	922.3	1,686.3	3,015.5	2.6
Rough trees:						
Sawtimber size	1.9	.8	6.6	20.1	29.4	13.6
Poletimber size	1.1	.1	9.2	29.4	39.8	11.3
Total rough trees	3.0	.9	15.8	49.5	69.2	9.0
Rotten trees:						
Sawtimber size	.3	.0	11.3	29.1	40.7	12.8
Poletimber size	.1	.0	2.0	4.8	6.9	14.3
Total rotten trees	.3	.0	13.3	33.9	47.5	11.3
Salvable dead[a] trees:						
Sawtimber size	4.9	.0	2.2	14.2	21.4	17.6
Poletimber size	1.9	.4	5.2	8.9	16.5	17.0
Total salvable dead trees	6.9	.4	7.4	23.1	37.8	13.2
All classes	370.4	48.1	958.8	1,792.8	3,170.1	2.6
SE	12.1	22.8	6.5	4.0	2.6	

[a] Includes noncommercial species.

Table 98.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Southern Cumberland Unit, Kentucky, 1988

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
			All live		
			(In millions of cubic feet)		
Softwoods	114.1	.4	.0	296.6	411.2
Hardwoods	557.1	48.7	.0	2,115.3	2,721.1
Total all live	671.2	49.2	.0	2,411.9	3,132.3
			Growing stock		
			(In millions of cubic feet)		
Softwoods	113.3	.4	.0	293.2	407.0
Hardwoods	541.4	47.9	.0	2,019.2	2,608.6
Total growing stock	654.7	48.3	.0	2,312.4	3,015.5
			Sawtimber		
			(In millions of board feet)		
Softwoods	317.8	1.1	.0	738.2	1,057.1
Hardwoods	1,701.4	177.2	.0	5,852.0	7,730.6
Total sawtimber	2,019.2	178.3	.0	6,590.2	8,787.7

Table 99.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Cumberland Unit, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	2.6	.0	.0	3.1	.0	1.8	.0	.0	.0	.0	7.6
Hard pines	48.0	79.5	101.9	93.5	40.2	18.6	4.4	2.0	.0	.0	388.1
Other softwoods	1.6	2.7	4.3	2.5	1.9	1.8	1.4	1.5	5.3	.6	23.6
Total softwoods	52.2	82.3	106.2	99.2	42.1	22.2	5.8	3.5	5.3	.6	419.3
Red maple	23.0	25.7	11.6	10.8	20.9	7.6	.0	2.0	.9	.0	102.5
Sugar maple	6.6	8.7	8.2	8.5	6.8	1.3	.0	.0	1.1	.0	41.1
Hickory	39.0	44.8	52.7	35.8	29.3	21.3	15.1	7.8	11.9	.0	257.8
Beech	6.2	8.1	7.3	8.8	11.8	13.2	10.5	13.8	34.2	11.6	125.6
Ash	4.8	4.6	4.5	4.3	3.9	1.0	1.0	.0	1.8	.0	26.0
Black walnut	.5	6.0	2.5	3.8	3.7	.0	.0	1.1	.0	.0	17.6
Sweetgum	2.7	5.2	8.1	.0	.0	.0	.0	.0	.0	.0	16.0
Yellow-poplar	21.3	44.0	58.8	56.1	61.7	30.9	26.6	7.8	8.6	3.5	319.2
Blackgum	5.8	2.6	1.7	6.4	5.1	5.0	6.3	3.0	4.0	.0	39.8
Select white oaks	41.2	48.2	63.9	43.8	27.6	28.7	24.4	9.4	13.9	2.2	303.4
Select red oaks	8.8	8.9	10.7	9.4	17.4	17.0	6.7	8.1	9.5	1.8	98.1
Other white oaks	25.2	25.6	47.2	35.0	32.6	30.9	13.2	8.2	16.7	1.0	235.6
Other red oaks	16.5	36.9	44.6	47.7	63.5	56.1	40.8	17.8	20.1	.0	344.1
Basswood	5.9	2.3	1.8	6.4	.8	1.0	1.6	.0	1.0	.0	20.7
Other hardwoods	25.9	29.8	16.2	12.4	15.4	2.8	3.6	3.5	3.8	.0	113.5
Total hardwoods	233.4	301.4	339.7	289.2	300.6	216.7	149.8	82.6	127.4	20.2	2,061.1
All species	285.6	383.7	445.9	388.4	342.7	238.9	155.6	86.1	132.8	20.7	2,480.4

Table 100.--Net volume of growing-stock trees on timberland by species and diameter class, Southern Cumberland Unit, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	1.8	1.8	1.3	1.1	1.0	.4	.0	.2	.0	.0	7.5	63.3
Hard pines	34.3	72.5	88.6	67.3	45.5	24.7	12.6	3.4	2.0	.0	350.8	12.4
Other softwoods	6.2	6.1	5.6	7.1	5.0	4.2	3.9	1.6	6.7	2.3	48.6	22.0
Total softwoods	42.2	80.3	95.5	75.5	51.5	29.3	16.5	5.1	8.7	2.3	407.0	10.9
Red maple	27.9	29.3	25.9	19.6	10.8	14.5	10.0	10.9	6.7	2.8	158.6	11.4
Sugar maple	9.5	9.9	10.3	10.2	7.9	7.6	8.4	3.5	4.6	1.2	73.2	18.8
Hickory	23.8	42.9	45.4	58.9	43.6	31.1	20.7	6.5	12.2	.0	285.2	8.6
Beech	1.4	5.3	8.8	10.0	10.7	11.8	10.8	11.5	44.3	18.8	133.4	21.1
Ash	6.0	6.1	6.1	4.8	3.4	3.9	2.1	.7	3.0	.0	36.2	16.1
Black walnut	.5	2.4	2.6	2.9	2.7	4.8	.4	.3	.0	.0	16.6	34.5
Sweetgum	1.3	2.4	5.0	.8	2.1	1.6	1.4	.9	.8	.0	16.5	27.2
Yellow-poplar	24.4	47.4	74.2	77.5	109.7	85.6	48.6	31.8	31.5	1.6	532.2	9.4
Blackgum	8.6	5.4	3.5	5.1	6.9	5.3	5.0	4.7	2.0	.0	46.4	14.6
Select white oaks	23.6	45.8	49.7	62.6	49.9	41.0	36.2	19.9	22.0	1.9	352.5	7.3
Select red oaks	4.5	10.6	13.0	11.2	15.7	17.5	16.0	10.8	25.4	1.6	126.5	11.5
Other white oaks	13.7	20.1	40.0	40.4	39.6	34.8	34.2	15.6	34.8	7.0	280.1	11.1
Other red oaks	11.6	26.2	35.8	40.5	54.2	60.9	49.3	37.7	42.0	1.9	360.0	10.4
Basswood	1.3	2.6	1.3	4.5	4.0	7.2	1.7	1.2	2.6	.9	27.3	27.3
Other hardwoods	25.6	31.1	29.2	20.8	20.0	14.0	8.0	7.4	6.4	1.2	163.8	12.5
Total hardwoods	183.7	287.4	351.0	369.9	381.1	341.7	253.1	163.5	238.3	38.9	2,608.6	3.3
All species	226.0	367.8	446.4	445.4	432.7	370.9	269.6	168.6	247.0	41.2	3,015.5	2.6
SE	4.9	4.5	4.7	4.2	4.9	5.8	7.2	8.1	9.2	25.0	2.6	

Table 101.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Cumberland Unit, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	.0	6.7	.0	4.5	.0	.0	.0	.0	11.2
Hard pines	283.2	295.6	132.1	66.1	16.6	7.4	.0	.0	801.0
Other softwoods	12.4	8.4	7.5	7.4	5.7	6.9	25.3	3.0	76.5
Total softwoods	295.5	310.7	139.6	78.0	22.3	14.3	25.3	3.0	888.7
Red maple	-	46.3	103.2	44.1	.0	13.5	5.3	.0	212.4
Sugar maple	-	48.4	44.1	10.2	.0	.0	6.9	.0	109.6
Hickory	-	162.4	138.6	107.2	80.8	39.9	68.4	.0	597.3
Beech	-	41.8	53.0	57.5	45.5	71.4	190.4	59.2	518.8
Ash	-	10.5	11.5	2.3	3.2	.0	5.9	.0	33.5
Black walnut	-	14.3	15.8	.0	.0	5.1	.0	.0	35.2
Yellow-poplar	-	192.0	232.6	124.3	113.6	36.7	38.0	16.2	753.3
Blackgum	-	20.2	19.5	15.6	22.9	11.4	16.6	.0	106.1
Select white oaks	-	193.6	133.8	135.6	123.1	53.3	73.4	11.7	724.6
Select red oaks	-	39.4	71.9	73.7	31.8	36.4	46.2	10.5	309.8
Other white oaks	-	149.7	146.5	145.9	61.9	43.9	85.7	4.4	638.1
Other red oaks	-	170.9	248.0	226.7	177.7	76.0	94.7	.0	994.0
Basswood	-	45.1	6.0	9.4	14.7	.0	10.3	.0	85.5
Other hardwoods[a]	-	45.2	70.5	17.8	23.3	15.7	18.3	.0	190.7
Total hardwoods	-	1,179.8	1,295.1	970.3	698.3	403.4	660.1	102.0	5,308.9
All species	295.5	1,490.5	1,434.7	1,048.3	720.6	417.7	685.4	105.0	6,197.6

[a] Includes Sweetgum.

Table 102.--Net volume of sawtimber trees on timberland by species and diameter class, Southern Cumberland Unit, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	3.2	3.2	3.4	1.0	.0	1.0	.0	.0	11.8	53.4
Hard pines	272.8	245.2	183.2	109.6	57.7	15.7	9.9	.0	894.0	13.1
Other softwoods	14.7	24.8	19.4	18.7	18.2	7.8	34.6	13.1	151.3	24.4
Total softwoods	290.7	273.3	206.0	129.3	75.9	24.4	44.4	13.1	1,057.1	11.6
Red maple	-	69.2	46.2	62.3	48.8	51.5	37.1	17.7	332.7	17.8
Sugar maple	-	36.3	31.2	33.2	37.6	18.0	25.1	7.0	188.4	25.1
Hickory	-	206.9	183.3	137.6	93.3	32.8	65.0	.0	718.8	10.6
Beech	-	39.0	42.9	52.7	54.1	53.3	239.1	104.3	585.5	24.3
Ash	-	18.7	14.5	16.5	9.4	3.5	12.3	.0	74.9	25.4
Black walnut	-	10.5	10.2	18.3	2.3	1.6	.0	.0	42.9	39.8
Sweetgum	-	2.4	8.7	7.0	6.2	4.5	4.6	.0	33.4	34.4
Yellow-poplar	-	278.5	460.6	389.6	237.7	163.3	174.4	9.5	1,713.7	11.1
Blackgum	-	18.8	26.7	23.0	22.5	23.4	10.5	.0	124.8	21.9
Select white oaks	-	225.6	207.2	180.5	170.5	99.7	109.9	10.0	1,003.3	9.2
Select red oaks	-	38.1	60.4	72.5	70.3	50.5	125.8	9.3	427.0	13.6
Other white oaks	-	139.1	149.8	141.6	146.0	67.2	150.8	32.5	826.9	12.2
Other red oaks	-	136.9	210.9	259.8	223.3	176.7	212.8	10.4	1,230.7	12.0
Basswood	-	15.5	17.0	30.7	8.4	5.6	12.1	6.1	95.4	31.1
Other hardwoods	-	77.7	82.0	59.2	36.5	36.5	34.0	6.1	332.0	15.3
Total hardwoods	-	1,313.2	1,551.7	1,484.5	1,167.1	787.9	1,213.4	212.8	7,730.6	4.4
All species	290.7	1,586.4	1,757.6	1,613.8	1,243.0	812.4	1,257.9	225.9	8,787.7	3.8
SE	14.6	4.3	5.0	6.0	7.4	8.2	9.6	26.0	3.8	

Table 103.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Southern Cumberland Unit, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	4.5	-	-	-	4.5	11.2	-	-	-	11.2
Hard pines	11.4	13.6	65.1	-	90.1	72.6	101.8	626.6	-	801.0
Other softwoods	46.6	.5	1.0	.2	48.2	72.8	1.5	1.8	.4	76.5
Total softwoods	62.5	14.1	66.1	.2	142.8	156.6	103.3	628.4	.4	888.7
Red maple	14.2	10.9	33.9	3.9	62.9	14.2	39.7	124.3	34.2	212.4
Sugar maple	10.7	3.1	2.4	.9	17.1	15.1	14.3	67.8	12.3	109.6
Hickory	62.5	100.1	87.4	46.3	296.2	62.5	156.7	276.0	102.1	597.3
Beech	12.5	74.9	270.7	65.8	424.0	13.6	82.0	327.0	96.3	518.8
Ash	4.1	2.5	2.0	2.9	11.4	4.1	10.4	12.7	6.2	33.5
Black walnut	.0	3.4	1.4	.3	5.1	.0	5.7	25.9	3.7	35.2
Yellow-poplar	64.2	77.1	110.7	76.8	328.7	80.8	139.7	279.2	253.7	753.3
Blackgum	13.0	22.7	23.5	7.3	66.4	13.0	27.6	53.1	12.5	106.1
Select white oaks	90.9	108.4	136.1	61.7	397.2	94.6	156.5	335.5	138.0	724.6
Select red oaks	82.6	47.8	46.5	21.5	198.5	85.8	60.1	122.3	41.6	309.8
Other white oaks	82.3	104.5	115.1	40.0	341.9	86.3	160.1	302.5	89.2	638.1
Other red oaks	76.2	136.7	224.1	138.2	575.2	92.9	209.2	410.1	281.8	994.0
Basswood	9.3	8.3	14.9	1.9	34.4	9.3	8.3	62.7	5.2	85.5
Other hardwoods	6.0	23.1	32.0	14.0	75.1	10.8	43.6	99.1	37.2	190.7
Total hardwoods	528.5	723.3	1,100.7	481.6	2,834.0	582.8	1,113.9	2,498.2	1,114.0	5,308.9
Percent of hardwood in each grade	19	25	39	17	100	11	21	47	21	100

Table 104.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Southern Cumberland Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	2.0	-	-	-	2.0	11.8	-	-	-	11.8
Hard pines	41.9	22.7	128.2	-	192.9	123.4	92.5	678.1	-	894.0
Other softwoods	81.6	4.2	5.3	1.2	92.4	129.8	9.7	9.6	2.2	151.3
Total softwoods	125.5	26.9	133.5	1.2	287.2	265.0	102.2	687.7	2.2	1,057.1
Red maple	13.0	34.3	108.9	61.1	217.3	13.0	42.7	166.4	110.6	332.7
Sugar maple	25.6	25.0	40.0	30.2	121.0	28.2	28.3	72.2	59.7	188.4
Hickory	22.6	95.2	103.0	107.8	328.6	23.7	156.4	294.2	244.5	718.8
Beech	4.0	24.2	205.0	270.3	503.5	4.2	24.2	233.5	323.5	585.5
Ash	5.9	18.4	13.0	4.4	41.7	5.9	28.3	30.9	9.8	74.9
Black walnut	2.8	1.5	13.8	4.0	22.2	2.8	5.9	27.3	6.9	42.9
Sweetgum	4.2	5.1	6.6	6.4	22.3	4.2	8.9	10.0	10.4	33.4
Yellow-poplar	124.2	206.9	343.1	300.4	974.6	133.5	302.0	628.5	649.7	1,713.7
Blackgum	10.6	30.3	29.7	8.7	79.4	10.6	38.7	54.2	21.3	124.8
Select white oaks	80.8	128.3	157.0	204.4	570.5	82.7	200.0	340.1	380.5	1,003.3
Select red oaks	47.5	62.1	119.1	99.7	328.4	49.1	70.9	160.8	146.2	427.0
Other white oaks	59.4	101.4	205.2	172.0	538.0	60.2	154.5	351.1	261.1	826.9
Other red oaks	100.5	186.6	287.0	308.8	883.0	100.5	218.5	399.2	512.4	1,230.7
Basswood	10.5	14.9	26.3	11.2	62.9	10.7	18.9	47.9	17.9	95.4
Other hardwoods	7.6	42.9	81.9	39.8	172.3	10.3	61.8	152.9	107.1	332.0
Total hardwoods	519.4	977.3	1,739.7	1,629.3	4,865.8	539.6	1,360.1	2,969.2	2,861.7	7,730.6
Percent of hardwood in each grade	11	20	36	33	100	7	18	38	37	100

Table 105.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Southern Cumberland Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Eastern redcedar	.0	-	-	-	2.0	2.0	2.7	-	-	-	9.0	11.8
Hard pines	79.1	32.7	75.1	-	6.0	192.9	229.9	150.4	494.3	-	19.5	894.0
Other softwoods	77.8	5.0	2.5	.0	7.0	92.4	121.2	15.7	2.5	.0	11.9	151.3
Total softwoods	156.9	37.7	77.6	.0	15.0	287.2	353.8	166.1	496.8	.0	40.4	1,057.1
Red maple	18.2	41.7	61.5	49.7	46.3	217.3	18.2	54.3	113.0	91.0	56.3	332.7
Sugar maple	11.9	31.3	20.6	19.9	37.3	121.0	11.9	34.4	55.0	44.7	42.5	188.4
Hickory	37.8	102.4	69.0	75.0	44.5	328.6	37.8	193.8	275.5	163.0	48.7	718.8
Beech	3.1	38.8	49.9	239.6	172.1	503.5	3.1	38.8	69.7	290.3	183.5	585.5
Ash	9.4	24.1	6.9	.0	1.3	41.7	9.4	35.3	26.1	.4	3.6	74.9
Black walnut	.0	5.4	11.9	1.9	2.9	22.2	.0	12.0	23.6	2.5	4.9	42.9
Sweetgum	9.1	8.5	2.7	.0	2.0	22.3	9.1	15.4	5.2	1.7	2.0	33.4
Yellow-poplar	201.4	249.0	283.3	190.8	50.1	974.6	201.4	399.8	588.9	462.8	60.8	1,713.7
Blackgum	11.2	43.6	11.6	4.2	8.8	79.4	11.2	51.9	37.9	12.6	11.2	124.8
Select white oaks	93.0	174.8	151.0	103.6	48.0	570.5	93.0	269.2	364.7	218.3	58.0	1,003.3
Select red oaks	44.8	87.2	97.5	72.8	26.2	328.4	44.8	98.1	139.9	112.6	31.5	427.0
Other white oaks	84.2	132.8	184.3	82.5	54.2	538.0	84.2	203.6	337.9	139.0	62.3	826.9
Other red oaks	158.7	263.2	233.1	177.6	50.4	883.0	158.7	306.9	372.5	327.9	64.7	1,230.7
Basswood	21.1	12.2	6.9	9.1	13.6	62.9	21.1	18.8	27.9	14.0	13.6	95.4
Other hardwoods	11.0	50.5	51.0	29.8	30.0	172.3	11.0	80.1	115.2	87.7	37.9	332.0
Total hardwoods	714.9	1,265.5	1,241.2	1,056.5	587.7	4,865.8	714.9	1,812.4	2,553.1	1,968.6	681.6	7,730.6
All species	871.8	1,303.2	1,318.8	1,056.5	602.6	5,152.9	1,068.7	1,978.5	3,049.9	1,968.6	722.0	8,787.7

Table 106.--Average annual net change of growing-stock volume on timberland by species and component of change, Southern Cumberland Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Eastern redcedar	0	33	33	-37	0	-4	0	-4
Hard pines	1,999	7,587	9,587	-5,913	-148	3,526	-6,861	-3,335
Other softwoods	838	1,642	2,480	-23	-53	2,403	-166	2,237
Total softwoods	2,838	9,262	12,100	-5,974	-201	5,925	-7,027	-1,102
Red maple	1,928	3,815	5,743	-170	-118	5,454	-445	5,009
Sugar maple	797	2,257	3,054	-135	-58	2,861	0	2,861
Hickory	521	6,490	7,012	-1,806	-34	5,171	-2,728	2,443
Beech	30	2,631	2,660	-495	-797	1,368	-667	701
Ash	225	1,099	1,324	-121	-108	1,095	-185	910
Black walnut	0	204	204	-138	-155	-88	0	-88
Sweetgum	143	192	335	-135	-25	175	-131	43
Yellow-poplar	2,261	21,217	23,479	-581	-250	22,647	-3,617	19,030
Blackgum	233	676	909	-141	-102	666	-75	591
Select white oaks	661	8,255	8,916	-936	-505	7,475	-3,087	4,388
Select red oaks	177	4,077	4,255	-317	-104	3,834	-1,299	2,535
Other white oaks	557	5,738	6,295	-360	-243	5,692	-1,712	3,980
Other red oaks	507	10,209	10,716	-3,855	-337	6,525	-5,096	1,429
Basswood	428	743	1,171	-227	0	943	-354	589
Other hardwoods	1,333	4,765	6,098	-661	-220	5,217	-721	4,496
Total hardwoods	9,802	72,370	82,172	-10,079	-3,058	69,036	-20,119	48,917
All species	12,640	81,633	94,273	-16,052	-3,258	74,962	-27,147	47,815

Table 107.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Southern Cumberland Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Eastern redcedar	-4	0
Hard pines	3,526	-6,861
Other softwoods	2,403	-166
Total softwoods	5,925	-7,027
Red maple	5,454	-445
Sugar maple	2,861	0
Hickory	5,171	-2,728
Beech	1,368	-667
Ash	1,095	-185
Black walnut	-88	0
Sweetgum	175	-131
Yellow-poplar	22,647	-3,617
Blackgum	666	-75
Select white oaks	7,475	-3,087
Select red oaks	3,834	-1,299
Other white oaks	5,692	-1,712
Other red oaks	6,525	-5,096
Basswood	943	-354
Other hardwoods	5,217	-721
Total hardwoods	69,036	-20,119
All species	74,962	-27,147

Table 108.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Southern Cumberland Unit, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Eastern redcedar	48	0
Hard pines	23,980	-15,669
Other softwoods	7,290	-601
Total softwoods	31,318	-16,270
Red maple	11,520	-769
Sugar maple	7,048	0
Hickory	18,920	-8,059
Beech	9,348	-3,394
Ash	4,254	-551
Black walnut	688	0
Sweetgum	1,040	0
Yellow-poplar	97,593	-11,780
Blackgum	2,101	-430
Select white oaks	35,354	-10,453
Select red oaks	15,098	-4,628
Other white oaks	21,790	-4,918
Other red oaks	39,931	-18,785
Basswood	2,412	-1,522
Other hardwoods	15,885	-1,317
Total hardwoods	282,982	-66,605
All species	314,300	-82,876

Table 109.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Southern Cumberland Unit, Kentucky, 1974-87

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Eastern redcedar	-37	0
Hard pines	-5,913	-10,961
Other softwoods	-23	0
Total softwoods	-5,974	-10,961
Red maple	-170	-354
Sugar maple	-135	-394
Hickory	-1,806	-5,149
Beech	-495	-1,671
Ash	-121	0
Black walnut	-138	0
Sweetgum	-135	0
Yellow-poplar	-581	-762
Blackgum	-141	-225
Select white oaks	-936	-1,084
Select red oaks	-317	-1,039
Other white oaks	-360	-727
Other red oaks	-3,855	-10,662
Basswood	-227	0
Other hardwoods	-661	-774
Total hardwoods	-10,079	-22,842
All species	-16,052	-33,803

Table 110.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Southern Cumberland Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	1,801	18,344	20,145	-1,182	-2,624	-3,806
Other public	109	935	1,045	-627	-105	-732
Other private	4,015	49,757	53,772	-5,218	-17,390	-22,608
All classes	5,925	69,036	74,962	-7,027	-20,119	-27,147

Table 111.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Southern Cumberland Unit, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	13,081	79,946	93,027	-1,858	-10,101	-11,959
Other public	350	3,464	3,814	-1,429	-171	-1,600
Other private	17,887	199,572	217,459	-12,984	-56,334	-69,317
All classes	31,318	282,982	314,300	-16,270	-66,605	-82,876

BLUEGRASS UNIT TABLES

Table 112.--Area of timberland by forest type, forest-type group, and stand-size class, Bluegrass Unit, Kentucky, 1975

(In thousands of acres)

Forest type	Stand-size class				All classes
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked	
Virginia pine	.0	14.6	.0	.0	14.6
Eastern redcedar	14.6	.0	59.2	.0	73.8
Loblolly/shortleaf group	14.6	14.6	59.2	.0	88.4
Eastern redcedar/hardwood	.0	15.7	59.3	.0	75.0
Virginia pine/oak	14.8	.0	.0	.0	14.8
Loblolly pine/hardwood	.0	14.6	.0	.0	14.6
Other oak/pine	.0	.0	14.6	.0	14.6
Oak/pine group	14.8	30.3	73.9	.0	119.0
Chestnut oak	14.8	14.8	.0	.0	29.6
White oak/red oak/hickory	29.4	73.7	14.9	.0	118.0
White oak	.0	.0	14.6	.0	14.6
Y. poplar/wh. oak/no. red oak	14.8	.0	.0	.0	14.8
Black walnut	.0	.0	45.2	.0	45.2
Scarlet oak	.0	14.8	.0	.0	14.8
Mixed central hardwoods	190.3	87.9	235.5	.0	513.6
Oak/hickory group	249.4	191.2	310.1	.0	750.7
Black ash/Amer. elm/red maple	29.4	29.5	62.7	.0	121.6
Red maple(upland)	.0	.0	.0	14.6	14.6
Willow	.0	14.9	.0	.0	14.9
Sycamore/pecan/American elm	.0	14.6	14.9	.0	29.5
American elm/green ash	.0	29.2	44.3	.0	73.5
Elm/ash/red maple group	29.4	88.1	121.9	14.6	254.1
Sugar maple/beech/yellow birch	.0	.0	14.6	.0	14.6
Pin cherry/reverting field	.0	.0	29.2	.0	29.2
Mixed northern hardwoods	14.6	.0	59.4	.0	74.0
Northern hardwoods group	14.6	.0	103.2	.0	117.8
All forest types	322.8	324.3	668.3	14.6	1,330.1

Table 113.--Area of timberland by forest type, forest-type group, and stand-size class, Bluegrass Unit, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Virginia pine	8.2	.0	.0	.0	8.2	100.0
Eastern redcedar	18.8	41.3	5.5	.0	65.6	34.5
Loblolly/shortleaf group	27.1	41.3	5.5	.0	73.9	32.6
Eastern redcedar/hardwood	44.7	65.0	75.1	.0	184.8	20.5
Shortleaf pine/oak	9.4	.0	.0	.0	9.4	100.0
Virginia pine/oak	.0	22.1	.0	.0	22.1	55.3
Loblolly pine/hardwood	3.9	.0	.0	.0	3.9	100.0
Oak/pine group	58.0	87.1	75.1	.0	220.2	18.3
Post, black, or bear oak	11.8	8.0	10.0	.0	29.9	51.7
Chestnut oak	14.5	.0	7.4	.0	21.9	55.3
White oak/red oak/hickory	80.9	20.3	27.7	.0	128.9	24.0
White oak	37.4	5.8	.0	.0	43.2	46.6
Northern red oak	17.6	.0	.0	.0	17.6	71.4
Y. poplar/wh. oak/no. red oak	7.4	.0	.0	.0	7.4	100.0
Black locust	7.8	.0	12.6	.0	20.4	72.6
Black walnut	6.4	32.7	.0	.0	39.1	46.1
Hawthorn/reverting field	.0	.0	64.0	.0	64.0	42.6
Scarlet oak	8.2	.0	7.5	.0	15.7	70.8
Sassafras/persimmon	.0	.0	5.5	.0	5.5	100.0
Mixed central hardwoods	242.9	272.1	127.5	.0	642.4	8.7
Oak/hickory group	435.0	339.0	262.2	.0	1,036.2	5.7
Black ash/Amer. elm/red maple	34.5	18.5	7.8	.0	60.9	37.2
River birch/sycamore	7.6	.0	7.3	.0	14.8	70.7
Sycamore/pecan/American elm	.0	14.2	8.0	.0	22.2	58.0
American elm/green ash	7.6	65.6	22.9	.0	96.1	29.2
Elm/ash/red maple group	49.7	98.3	46.0	.0	194.0	19.9
Sugar maple/beech/yellow birch	25.3	20.7	.0	.0	45.9	45.8
Black cherry	9.4	.0	7.7	.0	17.1	71.1
Pin cherry/reverting field	.0	7.2	.0	.0	7.2	100.0
Mixed northern hardwoods	29.4	30.3	15.2	.0	74.8	30.3
Northern hardwoods group	64.0	58.2	22.9	.0	145.1	22.5
All forest types	633.8	623.8	411.8	.0	1,669.4	2.4
SE	8.6	9.0	13.3	.0	2.4	

Table 114.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Bluegrass Unit, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9
Eastern redcedar	82,111	50,644	14,814	7,573	2,504	1,135	301
Hard pines	0	3,621	1,577	1,190	1,129	577	296
Total softwoods	82,111	54,265	16,391	8,763	3,633	1,712	597
Red maple	7,696	1,506	1,957	525	566	139	226
Sugar maple	47,567	23,411	6,353	2,806	2,012	675	425
Hickory	24,823	15,164	9,042	6,357	3,606	2,470	1,074
Beech	7,695	0	481	26	48	77	19
Ash	39,393	8,046	7,675	5,754	2,389	1,399	1,034
Black walnut	0	7,692	4,682	3,472	2,142	716	378
Sweetgum	0	788	0	0	0	82	85
Yellow-poplar	1,670	0	1,051	610	182	266	188
Blackgum	11,351	1,670	626	177	29	62	82
Select white oaks	19,167	3,628	5,300	5,454	2,893	1,930	1,074
Select red oaks	11,491	0	1,010	1,194	698	672	837
Other white oaks	5,950	3,457	1,024	1,778	1,096	905	551
Other red oaks	5,498	1,951	1,797	931	1,633	753	519
Basswood	1,312	0	0	0	26	26	92
Other hardwoods	144,905	44,921	25,855	12,642	7,216	3,403	1,944
Total hardwoods	328,519	112,235	66,854	41,727	24,537	13,577	8,528
All species	410,631	166,500	83,245	50,491	28,170	15,289	9,125
SE	7.8	10.7	5.6	5.9	5.9	6.1	8.0

Table 114.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	64	134	21	0	0	159,302	15.2
Hard pines	130	15	7	19	0	8,562	49.7
Total softwoods	193	149	27	19	0	167,864	14.6
Red maple	76	16	33	35	0	12,777	44.3
Sugar maple	289	116	230	92	17	83,993	16.1
Hickory	387	269	163	73	0	63,428	16.4
Beech	39	0	0	7	5	8,398	57.1
Ash	597	218	124	262	0	66,891	16.7
Black walnut	142	125	0	41	0	19,391	25.9
Sweetgum	22	17	0	11	0	1,005	79.6
Yellow-poplar	200	170	0	86	0	4,423	43.9
Blackgum	0	0	0	0	0	13,999	44.9
Select white oaks	661	676	423	377	69	41,653	19.9
Select red oaks	390	252	199	301	53	17,099	37.9
Other white oaks	334	263	74	77	4	15,514	28.6
Other red oaks	269	220	82	192	29	13,873	29.4
Basswood	59	49	10	10	0	1,584	83.7
Other hardwoods	1,200	646	193	344	46	243,315	11.4
Total hardwoods	4,665	3,038	1,533	1,907	223	607,343	5.8
All species	4,858	3,187	1,560	1,927	223	775,206	5.2
SE	9.9	11.0	13.8	14.1	26.4	5.2	

Table 115.--Net dry weight of all live trees on timberland by species and diameter class, Bluegrass Unit, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Eastern redcedar	1,644	1,060	1,046	731	486	175	89	177	52	28	5,489	12.8
Hard pines	72	108	162	259	213	148	82	16	6	20	1,087	42.1
Total softwoods	1,716	1,168	1,208	990	699	323	171	193	59	49	6,575	12.1
Red maple	74	186	102	163	83	145	102	19	68	68	1,011	32.9
Sugar maple	1,426	849	753	875	396	431	441	256	473	548	6,447	15.5
Hickory	687	990	1,448	1,335	1,603	1,033	573	481	381	259	8,790	9.6
Beech	26	56	6	73	44	17	42	21	47	130	462	49.5
Ash	629	851	1,268	836	787	834	562	303	186	590	6,847	10.4
Black walnut	243	379	636	664	340	260	135	172	25	124	2,977	12.2
Sweetgum	31	0	0	0	67	63	21	25	0	23	230	51.2
Yellow-poplar	5	77	99	44	106	113	160	186	0	189	981	24.3
Blackgum	90	61	39	9	35	53	0	0	0	0	288	37.9
Select white oaks	132	394	921	935	1,036	827	768	1,046	879	1,710	8,648	12.3
Select red oaks	75	108	244	249	409	784	518	459	466	1,790	5,103	17.3
Other white oaks	187	92	365	385	560	507	394	419	168	401	3,478	19.6
Other red oaks	131	177	209	543	421	394	283	349	155	851	3,513	17.9
Basswood	2	0	9	9	12	74	64	92	23	39	322	44.1
Other commercial hardwoods	2,191	2,418	2,393	2,334	1,949	1,610	1,365	949	409	1,673	17,291	8.1
Noncommercial hardwoods	1,058	422	287	214	156	87	35	9	52	107	2,427	20.0
Total hardwoods	6,987	7,061	8,779	8,671	8,005	7,232	5,465	4,785	3,332	8,502	68,818	4.1
All species	8,703	8,229	9,987	9,661	8,704	7,555	5,636	4,978	3,391	8,550	75,394	3.6
SE	8.5	5.5	5.5	5.6	5.7	8.0	9.6	10.1	12.9	12.8	3.6	

Table 116.--Net dry weight[a] of all trees on timberland by class of material and species group, Bluegrass Unit, Kentucky, 1988

(In thousands of tons)

Class of material	Species group		All groups	SE
	Softwoods	Hardwoods		
Sawtimber trees:				
Sawlog portion	1,373	20,845	22,219	[illegible]
Upper stem	206	4,688	4,894	[illegible]
Total sawtimber trees	1,579	25,533	27,112	[illegible]
Poletimber trees	1,591	15,964	17,555	[illegible]
All growing stock	3,170	41,497	44,667	[illegible]
Rough cull trees[b]	276	2,854	3,131	11.7
Rotten cull trees[b]	23	1,220	1,242	[illegible]
Salvable dead trees[c]	164	1,132	1,295	[illegible]
Saplings[c]	1,716	6,987	8,703	[illegible]
Tops - growing stock	1,293	14,846	16,139	4.0
Tops - rough and rotten	97	1,414	1,511	[illegible]
All nongrowing stock	3,569	28,453	32,022	[illegible]
All classes	6,739	69,950	76,689	[illegible]
SE	12.1	4.1	3.7	

[a] Includes bark and sound cull; excludes rotten cull.
[b] Bole portion of trees 5.0 inches d.b.h. and larger.
[c] Includes entire tree aboveground.

Table 117.--Net volume of all trees on timberland by class of timber and species group, Bluegrass Unit, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	28.6	35.3	201.6	508.6	774.1	6.7
Upper stem	4.2	5.5	45.9	116.7	172.4	6.2
Total sawtimber trees	32.8	40.7	247.5	625.4	946.4	6.6
Poletimber trees	12.4	61.5	183.3	418.0	675.2	4.6
Total growing-stock trees	45.2	102.3	430.9	1,043.4	1,621.7	4.4
Rough trees:						
Sawtimber size	.0	6.2	6.4	23.0	35.5	12.7
Poletimber size	.0	.0	9.7	14.1	23.7	14.5
Total rough trees	.0	6.2	16.0	37.0	59.3	10.7
Rotten trees:						
Sawtimber size	.2	.6	6.8	17.8	25.4	14.5
Poletimber size	.0	.0	.8	1.5	2.3	33.2
Total rotten trees	.2	.6	7.6	19.3	27.7	14.2
Salvable dead[a] trees:						
Sawtimber size	.0	2.2	1.8	6.3	10.3	27.5
Poletimber size	.1	2.0	.7	3.3	6.2	26.8
Total salvable dead trees	.1	4.2	2.5	9.6	16.5	19.7
All classes	45.5	113.3	457.0	1,109.3	1,725.1	4.3
SE	41.7	14.8	8.7	5.4	4.3	

[a] Includes noncommercial species.

Table 118.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Bluegrass Unit, Kentuck [illegible]

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
			All live		
		(In millions of cubic feet)			
Softwoods	.0	8.2	.6	145.5	[illegible]
Hardwoods	29.3	6.9	9.3	1,508.7	[illegible]
Total all live	[illegible]	15.2	10.0	1,654.2	[illegible]
			Growing stock		
		(In millions of cubic feet)			
Softwoods	[illegible]	8.2	.6	138.5	[illegible]
Hardwoods	28.8	6.8	9.0	1,429.7	[illegible]
Total growing stock	28.8	15.0	9.6	1,568.2	[illegible]
			Sawtimber		
		(In millions of board feet)			
Softwoods	[illegible]	20.9	2.0	203.3	226.2
Hardwoods	111.6	11.7	27.9	3,560.9	3,712.1
Total sawtimber	111.6	32.6	30.0	3,764.2	[illegible]

Table 119.--Net volume of growing-stock trees on timberland by species and diameter class, Bluegrass Unit, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	27.7	17.0	7.7	4.4	5.5	4.3	2.0	.0	.0	.0	68.6
Hard pines	3.6	7.1	7.1	3.7	2.3	.8	.0	.0	.0	.0	24.6
Total softwoods	31.3	24.1	14.8	8.1	7.8	5.1	2.0	.0	.0	.0	93.3
Red maple	5.3	1.9	.0	3.1	2.8	2.9	.0	3.0	.0	.0	19.0
Sugar maple	6.9	18.8	14.9	7.2	9.7	6.8	.0	1.2	6.2	.0	71.8
Hickory	18.6	29.1	42.3	23.6	29.1	11.7	15.6	8.5	5.6	.0	184.1
Beech	.0	.0	.0	.0	.0	.0	1.8	.0	2.9	.0	4.6
Ash	6.3	23.8	20.7	15.9	14.7	11.5	9.5	9.7	8.0	1.3	121.3
Black walnut	11.6	10.5	8.3	6.8	7.8	6.9	1.6	1.4	1.4	.0	56.2
Yellow-poplar	.6	1.0	2.0	5.7	11.5	4.3	1.9	.0	6.1	.0	33.1
Blackgum	1.1	.0	.0	.0	2.6	.0	.0	.0	.0	.0	3.7
Select white oaks	24.6	16.8	21.9	25.7	17.3	17.7	9.6	4.4	19.3	3.3	160.7
Select red oaks	.0	7.5	13.6	10.4	9.7	8.6	18.2	9.7	12.0	1.5	91.2
Other white oaks	4.1	11.2	12.4	8.6	.0	7.9	6.9	3.4	4.0	.0	58.4
Other red oaks	6.3	11.7	14.3	13.4	3.6	4.4	1.6	3.9	5.0	.0	64.2
Basswood	.6	.0	.0	1.4	1.9	1.4	1.9	1.1	.0	.0	8.4
Other hardwoods[a]	41.6	43.5	47.8	36.1	12.8	8.5	20.3	12.6	14.4	3.5	241.2
Total hardwoods	127.6	175.9	198.3	158.0	123.6	92.7	88.8	58.7	84.9	9.7	1,118.1
All species	158.9	200.0	213.1	166.1	131.4	97.8	90.9	58.7	84.9	9.7	1,211.4

[a] Includes Sweetgum.

Table 120.--Net volume of growing-stock trees on timberland by species and diameter class, Bluegrass Unit, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	31.2	30.3	18.4	12.6	4.4	1.4	3.2	.6	.0	.0	102.3	15.1
Hard pines	4.7	7.6	12.2	8.9	6.3	3.4	.5	.3	1.2	.0	45.2	41.9
Total softwoods	35.9	37.9	30.7	21.5	10.8	4.8	3.7	.9	1.2	.0	147.4	15.6
Red maple	4.9	2.9	5.6	2.0	4.6	3.0	.6	1.5	2.1	.0	27.2	33.8
Sugar maple	17.9	17.7	22.0	10.8	10.3	9.6	4.8	10.1	5.9	1.6	110.7	18.6
Hickory	23.3	35.7	34.0	40.1	23.3	13.1	10.8	7.8	4.9	.0	192.9	10.1
Beech	.9	.1	.8	1.2	.6	1.3	.0	.0	.9	.7	6.4	50.8
Ash	17.7	34.2	25.0	23.6	23.3	18.4	9.7	7.1	20.7	.0	179.7	12.6
Black walnut	9.3	18.9	19.8	9.4	7.6	3.4	4.3	.0	2.7	.0	75.4	12.9
Sweetgum	.0	.0	.0	1.6	2.1	.7	.6	.0	.8	.0	5.8	54.1
Yellow-poplar	3.1	5.1	2.2	5.6	6.0	7.7	8.9	.0	7.3	.0	45.9	24.9
Blackgum	1.6	1.2	.3	1.0	1.4	.0	.0	.0	.0	.0	5.5	44.0
Select white oaks	11.1	27.4	26.7	24.8	21.3	18.3	22.1	18.6	24.1	7.0	201.4	11.9
Select red oaks	3.1	6.5	6.6	11.2	19.4	12.7	10.8	10.2	20.7	7.8	109.1	18.7
Other white oaks	2.1	9.1	10.2	12.8	10.8	8.1	9.4	2.9	4.5	2.8	72.8	19.6
Other red oaks	4.0	5.3	14.7	11.8	11.5	8.6	8.7	3.8	13.3	3.1	84.6	18.8
Basswood	.0	.0	.3	.3	1.6	1.6	1.2	.6	.7	.0	6.3	41.8
Other hardwoods	51.2	58.3	60.7	45.7	39.8	33.9	23.3	8.9	22.8	6.1	350.6	8.7
Total hardwoods	150.1	222.3	228.9	201.8	183.4	140.4	115.2	71.5	131.4	29.1	1,474.2	4.9
All species	186.1	260.2	259.6	223.3	194.2	145.2	118.9	72.4	132.6	29.1	1,621.7	4.4
SE	6.1	6.0	6.2	6.3	8.1	10.1	11.4	14.6	15.5	24.9	4.4	

Table 121.--Net volume of sawtimber trees on timberland by species and diameter class, Bluegrass Unit, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	24.4	13.6	15.6	13.5	6.2	.0	.0	.0	73.3
Hard pines	12.4	6.7	4.8	2.2	.0	.0	.0	.0	26.1
Total softwoods	36.9	20.3	20.4	15.7	6.2	.0	.0	.0	99.5
Red maple	-	10.7	10.3	11.2	.0	15.0	.0	.0	47.2
Sugar maple	-	36.8	42.3	38.2	.0	4.3	37.2	.0	158.8
Hickory	-	85.4	105.5	42.5	56.7	31.8	21.8	.0	343.8
Beech	-	.0	.0	.0	4.9	.0	14.9	.0	19.8
Ash	-	48.8	46.4	42.2	31.9	36.1	29.5	3.9	238.8
Black walnut	-	24.0	32.1	26.7	8.0	6.6	4.8	.0	102.2
Yellow-poplar	-	15.6	37.4	13.7	7.4	.0	21.2	.0	95.2
Blackgum	-	.0	8.7	.0	.0	.0	.0	.0	8.7
Select white oaks	-	109.1	76.7	83.0	43.8	22.4	100.8	16.1	452.0
Select red oaks	-	36.4	35.9	34.2	78.2	42.3	56.8	3.9	287.7
Other white oaks	-	41.3	.0	41.1	33.4	18.9	21.9	.0	156.7
Other red oaks	-	46.5	14.8	19.0	8.0	15.8	22.3	.0	126.3
Basswood	-	5.9	8.8	6.2	10.1	5.1	.0	.0	36.3
Other hardwoods[a]	-	132.4	52.9	34.0	92.4	56.3	64.6	18.8	451.4
Total hardwoods	-	593.1	471.8	392.1	374.8	254.6	395.8	42.6	2,524.9
All species	36.9	613.3	492.3	407.8	381.0	254.6	395.8	42.6	2,624.3

[a] Includes Sweetgum.

Table 122.--Net volume of sawtimber trees on timberland by species and diameter class, Bluegrass Unit, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	39.7	32.6	14.2	4.5	12.1	2.3	.0	.0	105.5	22.9
Hard pines	38.7	32.3	26.1	14.3	2.3	1.4	5.6	.0	120.7	38.0
Total softwoods	78.5	65.0	40.3	18.8	14.4	3.7	5.6	.0	226.2	22.2
Red maple	-	5.9	16.2	11.8	3.2	5.9	8.6	.0	51.5	41.1
Sugar maple	-	37.9	40.4	40.6	18.0	47.0	29.9	6.2	219.9	22.8
Hickory	-	145.0	92.3	56.7	49.3	34.9	25.7	.0	403.9	13.2
Beech	-	5.1	2.6	5.8	.0	.0	5.5	4.1	23.1	55.4
Ash	-	91.9	93.8	77.2	45.5	32.5	109.6	.0	450.6	19.0
Black walnut	-	31.4	29.9	15.7	17.8	.0	12.4	.0	107.3	21.1
Sweetgum	-	5.8	7.2	2.9	2.8	.0	3.6	.0	22.2	53.4
Yellow-poplar	-	21.4	26.1	35.7	44.7	.0	40.3	.0	168.2	30.5
Blackgum	-	3.1	6.4	.0	.0	.0	.0	.0	9.5	62.9
Select white oaks	-	84.0	85.0	79.2	96.7	89.6	127.9	36.1	598.5	16.2
Select red oaks	-	36.8	75.8	52.8	45.9	42.9	98.8	44.4	397.4	20.3
Other white oaks	-	43.2	40.9	31.8	39.0	13.9	21.2	21.6	211.7	22.8
Other red oaks	-	40.7	45.3	36.7	42.7	17.5	67.3	20.5	270.6	19.0
Basswood	-	1.2	7.4	7.8	7.4	2.4	4.0	.0	30.2	44.1
Other hardwoods	-	157.2	155.4	143.4	104.2	38.4	116.9	32.0	747.6	12.4
Total hardwoods	-	710.8	724.7	598.1	517.0	324.9	671.7	165.0	3,712.1	7.6
All species	78.5	775.7	765.0	616.9	531.4	328.6	677.3	165.0	3,938.3	7.1
SE	24.3	6.5	8.1	10.4	11.8	14.7	15.8	24.6	7.1	

Table 123.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Bluegrass Unit, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	19.7	-	-	-	19.7	73.3	-	-	-	73.3
Hard pines	.0	.0	2.2	-	2.2	.0	2.0	24.1	-	26.1
Total softwoods	19.7	.0	2.2	.0	21.9	73.3	2.0	24.1	.0	99.5
Red maple	.0	7.5	18.0	.7	26.2	.0	7.5	35.7	4.0	47.2
Sugar maple	17.2	10.3	36.3	15.9	79.7	19.9	17.3	67.2	54.4	158.8
Hickory	16.5	43.1	64.4	28.9	152.9	16.5	65.9	177.1	84.3	343.8
Beech	.0	.0	4.5	15.2	19.8	.0	.0	4.5	15.2	19.8
Ash	47.0	48.9	29.7	17.9	143.6	47.0	77.6	72.4	41.7	238.8
Black walnut	14.3	14.3	15.0	2.5	46.1	14.3	28.9	50.9	8.2	102.2
Yellow-poplar	12.5	13.6	11.9	4.3	42.2	20.2	27.8	32.9	14.3	95.2
Blackgum	.0	.0	.0	.0	.0	.0	.0	7.3	1.4	8.7
Select white oaks	62.5	69.5	94.4	39.8	266.2	72.4	106.4	176.8	96.4	452.0
Select red oaks	71.7	61.8	49.5	32.4	215.4	74.5	67.2	104.1	41.9	287.7
Other white oaks	33.7	38.8	36.9	5.9	115.3	33.7	38.8	71.7	12.4	156.7
Other red oaks	10.8	20.4	24.1	9.8	65.0	10.8	23.7	49.5	42.3	126.3
Basswood	7.9	7.2	5.4	1.1	21.5	10.2	8.2	15.8	2.0	36.3
Other hardwoods	53.7	50.0	119.8	42.6	266.1	53.7	74.3	241.3	82.2	451.4
Total hardwoods	347.7	385.3	509.9	217.0	1,460.0	373.2	543.6	1,107.2	500.8	2,524.9
Percent of hardwood in each grade	24	26	35	15	100	15	21	44	20	100

Table 124.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Bluegrass Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	18.9	-	-	-	18.9	105.5	-	-	-	105.5
Hard pines	.0	2.8	20.8	-	23.6	3.0	7.3	110.4	-	120.7
Total softwoods	18.9	2.8	20.8	-	42.5	108.5	7.3	110.4	-	226.2
Red maple	.0	1.4	26.3	1.7	29.4	.0	1.4	36.1	13.9	51.5
Sugar maple	22.9	11.6	44.1	63.1	141.7	27.9	19.9	86.3	85.8	219.9
Hickory	16.5	55.9	61.4	32.8	166.6	18.3	107.3	176.3	102.1	403.9
Beech	.0	.0	3.8	11.6	15.4	.0	.0	5.4	17.6	23.1
Ash	103.3	68.6	74.2	18.7	264.8	106.4	126.9	170.9	46.3	450.6
Black walnut	6.8	14.9	21.8	2.5	45.9	6.8	22.3	70.5	7.6	107.3
Sweetgum	.0	1.6	5.2	2.5	9.2	.6	2.7	10.1	8.7	22.2
Yellow-poplar	37.0	18.9	40.2	24.5	120.7	40.2	32.7	61.1	34.2	168.2
Blackgum	.0	.0	.0	.0	.0	.0	2.0	2.4	5.1	9.5
Select white oaks	70.8	57.5	116.5	184.7	429.5	71.9	77.3	191.0	258.4	598.5
Select red oaks	62.5	70.3	108.6	43.2	284.7	63.9	91.6	164.2	77.6	397.4
Other white oaks	20.8	35.3	30.3	41.1	127.5	22.2	40.1	72.0	77.4	211.7
Other red oaks	28.6	30.7	55.4	69.9	184.6	28.6	36.3	85.0	120.6	270.6
Basswood	1.3	.6	15.3	4.5	21.6	1.3	4.3	19.9	4.8	30.2
Other hardwoods	61.1	90.4	211.2	72.3	435.0	66.6	124.0	416.4	140.7	747.6
Total hardwoods	431.7	457.5	814.3	573.1	2,276.7	454.7	688.8	1,567.7	1,000.9	3,712.1
Percent of hardwood in each grade	19	20	36	25	100	12	19	42	27	100

Table 125.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Bluegrass Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Eastern redcedar	7.1	-	-	-	11.8	18.9	41.5	-	-	-	64.0	105.5
Hard pines	.0	5.6	16.4	-	1.5	23.6	5.7	14.2	96.1	-	4.7	120.7
Total softwoods	7.1	5.6	16.4	-	13.3	42.5	47.2	14.2	96.1	-	68.8	226.2
Red maple	.0	2.1	9.7	.0	17.6	29.4	.0	2.1	14.2	11.8	23.4	51.5
Sugar maple	7.7	14.3	32.5	54.8	32.3	141.7	7.7	24.5	75.0	70.2	42.6	219.9
Hickory	28.2	53.7	42.5	9.9	32.3	166.6	28.2	119.9	161.3	48.4	46.2	403.9
Beech	.0	.0	.0	11.3	4.1	15.4	.0	.0	1.6	17.4	4.1	23.1
Ash	157.9	52.4	19.2	3.2	32.0	264.8	157.9	125.3	112.0	4.6	50.8	450.6
Black walnut	11.0	18.7	5.8	.0	10.5	45.9	11.0	29.9	33.7	.0	32.7	107.3
Sweetgum	.0	2.9	6.3	.0	.0	9.2	.0	6.2	12.1	.0	3.9	22.2
Yellow-poplar	61.3	12.2	26.4	11.3	9.6	120.7	61.3	39.4	41.7	14.3	11.6	168.2
Blackgum	.0	.0	.0	.0	.0	.0	.0	3.0	1.8	4.7	.0	9.5
Select white oaks	101.3	76.8	99.0	64.6	87.8	429.5	101.3	108.2	183.1	101.9	104.1	598.5
Select red oaks	71.0	85.6	76.6	10.4	41.1	284.7	71.0	116.6	128.6	35.4	45.8	397.4
Other white oaks	32.7	43.7	15.8	26.9	8.4	127.5	32.7	52.2	62.5	47.1	17.2	211.7
Other red oaks	50.2	36.9	24.8	30.7	42.0	184.6	50.2	45.7	62.2	67.5	45.0	270.6
Basswood	2.6	.0	11.5	3.5	4.0	21.6	2.6	5.9	11.5	3.5	6.7	30.2
Other hardwoods	85.9	118.5	77.3	43.8	109.5	435.0	85.9	173.7	212.5	87.5	188.0	747.6
Total hardwoods	609.7	518.0	447.2	270.5	431.3	2,276.7	609.7	852.6	1,113.7	514.1	622.0	3,712.1
All species	616.8	523.6	463.7	270.5	444.6	2,319.1	656.8	866.8	1,209.9	514.1	690.7	3,938.3

Table 126.--Average annual net change of growing-stock volume on timberland by species and component of change, Bluegrass Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Eastern redcedar	1,941	1,722	3,663	-294	-106	3,264	-416	2,848
Hard pines	358	1,726	2,084	-345	0	1,739	0	1,739
Total softwoods	2,299	3,449	5,748	-639	-106	5,003	-416	4,587
Red maple	232	568	800	-108	0	692	0	692
Sugar maple	1,166	3,043	4,209	-250	-228	3,730	-430	3,300
Hickory	1,167	2,796	3,963	-1,671	-150	2,141	-1,397	744
Beech	52	188	240	0	-88	152	0	152
Ash	1,107	5,123	6,230	-329	-103	5,797	-853	4,944
Black walnut	857	1,924	2,781	-233	-150	2,398	-773	1,625
Sweetgum	0	79	79	0	0	79	0	79
Yellow-poplar	70	1,341	1,410	-327	0	1,083	0	1,083
Blackgum	69	83	151	0	0	151	0	151
Select white oaks	1,125	3,759	4,884	-263	-121	4,500	-1,051	3,449
Select red oaks	225	2,633	2,858	-809	-60	1,989	-479	1,509
Other white oaks	1,916	650	2,566	-181	-51	2,334	-1,116	1,218
Other red oaks	229	3,062	3,292	-661	-118	2,513	-784	1,728
Basswood	0	83	83	-148	-110	-175	0	-175
Other hardwoods	5,564	7,837	13,401	-2,217	-781	10,402	-724	9,678
Total hardwoods	13,779	33,169	46,948	-7,199	-1,962	37,787	-7,608	30,179
All species	16,079	36,617	52,696	-7,838	-2,067	42,790	-8,024	34,766

Table 127.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Bluegrass Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Eastern redcedar	3,264	-416
Hard pines	1,739	0
Total softwoods	5,003	-416
Red maple	692	0
Sugar maple	3,730	-430
Hickory	2,141	-1,397
Beech	152	0
Ash	5,797	-853
Black walnut	2,398	-773
Sweetgum	79	0
Yellow-poplar	1,083	0
Blackgum	151	0
Select white oaks	4,500	-1,051
Select red oaks	1,989	-479
Other white oaks	2,334	-1,116
Other red oaks	2,513	-784
Basswood	-175	0
Other hardwoods	10,402	-724
Total hardwoods	37,787	-7,608
All species	42,790	-8,024

Table 128.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Bluegrass Unit, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Eastern redcedar	2,921	-192
Hard pines	8,015	0
Total softwoods	10,935	-192
Red maple	359	0
Sugar maple	6,141	-958
Hickory	7,669	-2,572
Beech	277	0
Ash	21,055	-3,105
Black walnut	3,272	-2,841
Sweetgum	567	0
Yellow-poplar	6,191	0
Blackgum	69	0
Select white oaks	16,349	-3,931
Select red oaks	10,391	-1,098
Other white oaks	6,524	-1,866
Other red oaks	14,337	-2,113
Basswood	-514	0
Other hardwoods	27,449	-1,037
Total hardwoods	120,134	-19,522
All species	131,070	-19,714

Table 129.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Bluegrass Unit, Kentucky, 1974-87

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Eastern redcedar	-294	-736
Hard pines	-345	-856
Total softwoods	-639	-1,592
Red maple	-108	-358
Sugar maple	-250	-1,374
Hickory	-1,671	-5,045
Ash	-329	-689
Black walnut	-233	-184
Yellow-poplar	-327	-1,205
Select white oaks	-263	-740
Select red oaks	-809	-2,992
Other white oaks	-181	0
Other red oaks	-661	-682
Basswood	-148	-711
Other hardwoods	-2,217	-3,895
Total hardwoods	-7,199	-17,875
All species	-7,838	-19,467

Table 130.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Bluegrass Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	0	377	377	0	-1,288	-1,288
Forest industry	19	827	845	0	0	0
Other private	4,984	36,583	41,567	-416	-6,320	-6,736
All classes	5,003	37,787	42,790	-416	-7,608	-8,024

Table 131.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Bluegrass Unit, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	0	266	266	0	-1,007	-1,007
Forest industry	396	4,695	5,091	0	0	0
Other private	10,539	115,173	125,713	-192	-18,514	-18,706
All classes	10,935	120,134	131,070	-192	-19,522	-19,714

PENNYROYAL UNIT TABLES

Table 132.--Area of timberland by forest type, forest-type group, and stand-size class, Pennyroyal Unit, Kentucky, 1975

(In thousands of acres)

Forest type	Stand-size class				All classes
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked	
Loblolly pine	.0	12.5	.0	.0	12.5
Shortleaf pine	12.4	.0	12.5	.0	24.9
Virginia pine	12.5	12.5	11.5	.0	36.6
Eastern redcedar	.0	12.5	62.9	.0	75.3
Loblolly/shortleaf group	24.9	37.5	86.9	.0	149.3
Eastern redcedar/hardwood	12.4	37.1	49.9	.0	99.3
Virginia pine/oak	.0	12.5	12.4	.0	24.9
Oak/pine group	12.4	49.6	62.3	.0	124.2
Post, black, or bear oak	12.5	24.9	37.2	.0	74.6
Chestnut oak	50.1	24.7	.0	.0	74.8
White oak/red oak/hickory	112.0	74.6	74.7	.0	261.3
White oak	87.0	.0	.0	.0	87.0
Y. poplar/wh. oak/no. red oak	.0	25.0	12.5	.0	37.5
Yellow-poplar	.0	.0	49.7	.0	49.7
Scarlet oak	12.4	12.4	.0	.0	24.7
Mixed central hardwoods	648.3	260.7	186.0	.0	1,095.0
Oak/hickory group	922.3	422.3	360.0	.0	1,704.6
Black ash/Amer. elm/red maple	13.3	.0	.0	.0	13.3
River birch/sycamore	.0	12.5	12.5	.0	25.0
Cottonwood	.0	12.5	.0	.0	12.5
Sycamore/pecan/American elm	25.0	.0	.0	.0	25.0
Elm/ash/red maple group	38.3	25.0	12.5	.0	75.9
Sugar maple/beech/yellow birch	50.1	12.5	.0	.0	62.6
Mixed northern hardwoods	.0	12.5	.0	.0	12.5
Northern hardwoods group	50.1	25.0	.0	.0	75.1
All forest types	1,047.9	559.5	521.7	.0	2,129.1

Table 133.--Area of timberland by forest type, forest-type group, and stand-size class, Pennyroyal Unit, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Loblolly pine	8.7	.0	.0	.0	8.7	100.0
Shortleaf pine	4.8	.0	8.4	.0	13.2	[illegible]
Virginia pine	47.7	.0	22.7	.0	70.4	34.[illegible]
Eastern redcedar	[illegible]	39.[illegible]	[illegible]	.0	[illegible]	[illegible]
Pitch pine	7.6	.0	.0	.0	7.6	100.0
Loblolly/shortleaf group	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Eastern redcedar/hardwood	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Shortleaf pine/oak	[illegible]	[illegible]	.0	.0	[illegible]	[illegible]
Virginia pine/oak	[illegible]	[illegible]	0	.0	[illegible]	[illegible]
Oak/pine group	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Post, black, or bear oak	27.5	.0	4.3	.0	31.8	[illegible]
Chestnut oak	[illegible]	[illegible]	.0	.0	[illegible]	[illegible]
White oak/red oak/hickory	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
White oak	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Northern red oak	4.0	.0	0	.0	4.0	100.0
Y. poplar/wh. oak/no. red oak	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Sweetgum/yellow-poplar	11.3	7.5	0	.0	18.8	[illegible]
Yellow-poplar	46.6	7.6	17.7	.0	71.9	[illegible]
Hawthorn/reverting field	10.6	.0	41.7	.0	52.3	[illegible]
Sassafras/persimmon	.0	.0	11.8	.0	11.8	[illegible]
Mixed central hardwoods	[illegible]	[illegible]	[illegible]	.0	1,00[illegible].6	[illegible]
Oak/hickory group	1,[illegible].2	[illegible]	[illegible]	.0	[illegible]	[illegible]
Black ash/Amer. elm/red maple	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
River birch/sycamore	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Cottonwood	[illegible]	[illegible]	[illegible]	.0	[illegible]	100.[illegible]
Sycamore/pecan/American elm	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Elm/ash/red maple group	50.4	0	[illegible]	.0	[illegible]	[illegible]
Sugar maple/beech/yellow birch	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Black cherry	[illegible]	[illegible]	[illegible]	.0	[illegible]	[illegible]
Pin cherry/reverting field	[illegible]	.0	[illegible]	.0	[illegible]	[illegible]
Mixed northern hardwoods	[illegible]	.0	[illegible]	.0	[illegible]	[illegible]
Northern hardwoods group	[illegible]	[illegible]	[illegible]	0	[illegible]	[illegible]
All forest types	1,367.[illegible]	553.[illegible]	[illegible]	.0	2,247.6	1.7
SE	4.5	9.9	14.0	.0	1.7	

Table 134.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Pennyroyal Unit, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9
Hard pines	5,629	5,246	3,833	3,531	2,767	2,257	1,106
Other softwoods	86,147	20,781	13,534	5,783	1,557	890	407
Total softwoods	91,776	26,027	17,367	9,315	4,324	3,147	1,513
Red maple	72,657	14,376	5,087	2,416	2,087	450	466
Sugar maple	86,191	26,485	12,078	7,721	4,323	2,178	1,416
Hickory	30,322	9,947	9,685	6,992	5,666	4,040	1,885
Beech	24,451	3,126	2,103	1,902	1,147	982	867
Ash	20,447	11,471	4,135	3,092	1,849	1,279	825
Black walnut	2,011	4,538	1,935	1,345	1,056	323	181
Sweetgum	14,153	973	1,046	917	379	95	167
Yellow-poplar	27,563	0	4,956	3,759	3,281	2,559	1,587
Blackgum	44,533	4,175	1,491	1,545	805	581	286
Select white oaks	13,700	3,461	6,689	5,576	4,767	4,346	2,979
Select red oaks	4,627	3,401	1,547	1,993	1,685	1,381	996
Other white oaks	7,916	1,700	3,717	3,558	3,233	2,270	1,444
Other red oaks	29,063	5,150	4,359	3,908	3,479	2,094	2,158
Basswood	0	0	296	437	109	40	112
Other hardwoods	172,532	81,976	18,311	8,508	3,442	2,291	1,336
Total hardwoods	550,167	170,781	77,437	53,669	37,309	24,911	16,707
All species	641,943	196,808	94,803	62,983	41,632	28,058	18,220
SE	7.0	9.7	4.9	4.7	4.0	4.3	4.3

Table 134.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	518	308	77	89	0	25,361	26.8
Other softwoods	97	32	0	36	0	129,265	16.6
Total softwoods	616	340	77	125	0	154,627	14.7
Red maple	259	104	66	58	9	98,036	18.1
Sugar maple	667	488	218	106	10	141,883	10.9
Hickory	973	481	186	105	0	70,283	12.4
Beech	670	465	371	468	83	36,635	24.1
Ash	324	217	82	85	4	43,809	19.2
Black walnut	169	16	39	13	0	11,626	44.4
Sweetgum	72	13	31	0	0	17,848	35.6
Yellow-poplar	1,378	928	555	383	14	46,963	21.0
Blackgum	93	35	26	0	0	53,569	29.0
Select white oaks	1,951	1,215	586	558	55	45,883	11.2
Select red oaks	788	426	362	359	23	17,588	25.7
Other white oaks	1,119	601	298	194	11	26,062	17.6
Other red oaks	1,057	589	370	425	32	52,687	16.7
Basswood	36	10	38	6	0	1,086	37.1
Other hardwoods	839	388	224	353	97	290,298	9.9
Total hardwoods	10,395	5,977	3,452	3,115	337	954,257	5.1
All species	11,011	6,317	3,529	3,240	337	1,108,884	4.8
SE	5.6	6.4	8.3	9.2	24.7	4.8	

Table 135.--Net dry weight of all live trees on timberland by species and diameter class, Pennyroyal Unit, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Hard pines	151	277	497	651	827	592	368	276	104	137	3,881	18.1
Other softwoods	897	924	823	477	385	242	107	59	0	93	4,007	11.9
Total softwoods	1,048	1,201	1,320	1,128	1,211	834	475	336	104	230	7,888	11.1
Red maple	902	452	424	600	218	340	253	122	126	195	3,632	14.0
Sugar maple	1,723	1,640	1,982	1,845	1,482	1,257	826	747	401	401	12,304	8.8
Hickory	559	1,006	1,487	2,256	2,531	1,739	1,350	831	455	473	12,688	6.4
Beech	266	251	504	492	677	790	817	698	693	1,976	7,163	13.0
Ash	585	470	684	656	693	600	334	273	147	217	4,658	9.8
Black walnut	193	169	225	318	179	133	151	18	47	33	1,465	21.5
Sweetgum	152	93	179	131	51	119	76	19	58	0	879	25.3
Yellow-poplar	108	337	547	803	1,041	949	1,129	1,051	796	799	7,561	9.1
Blackgum	286	141	274	279	311	223	115	49	43	13	1,734	14.4
Select white oaks	131	530	927	1,503	2,245	2,364	2,246	1,829	1,243	2,789	15,808	8.2
Select red oaks	214	145	431	644	834	875	1,008	739	843	1,679	7,412	9.6
Other white oaks	99	329	706	1,170	1,306	1,194	1,283	913	602	725	8,328	11.6
Other red oaks	380	436	769	1,197	1,150	1,664	1,101	843	703	1,444	9,688	9.1
Basswood	0	26	85	43	43	85	40	10	80	16	428	32.3
Other commercial hardwoods	3,685	1,719	1,637	1,186	1,156	1,017	922	582	361	1,752	14,018	10.5
Noncommercial hardwoods	1,457	581	319	131	76	50	67	37	30	0	2,748	13.5
Total hardwoods	10,740	8,326	11,180	13,257	13,992	13,399	11,718	8,764	6,627	12,512	110,516	3.0
All species	11,788	9,527	12,501	14,385	15,203	14,233	12,194	9,099	6,731	12,743	118,404	2.7
SE	7.9	4.5	4.5	3.9	4.2	4.3	5.5	6.4	8.1	10.7	2.7	

Table 136.--Net dry weight[a] of all trees on timberland by class of material and species group, Pennyroyal Unit, Kentucky, 1988

(In thousands of tons)

Class of material	Species group		All groups	SE
	Softwoods	Hardwoods		
Sawtimber trees:				
Sawlog portion	2,647	39,560	42,207	3.8
Upper stem	357	8,904	9,261	3.6
Total sawtimber trees	3,004	48,464	51,468	3.8
Poletimber trees	1,658	21,884	23,542	3.2
All growing stock	4,662	70,348	75,010	2.9
Rough cull trees[b]	271	2,006	2,277	9.4
Rotten cull trees[b]	32	1,669	1,701	9.9
Salvable dead trees[c]	157	612	769	13.8
Saplings[c]	1,048	10,740	11,788	7.9
Tops - growing stock	1,772	24,470	26,242	2.8
Tops - rough and rotten	103	1,282	1,385	6.6
All nongrowing stock	3,383	40,779	44,162	3.0
All classes	8,045	111,128	119,173	2.7
SE	11.1	3.0	2.7	

[a] Includes bark and sound cull; excludes rotten cull.

[b] Bole portion of trees 5.0 inches d.b.h. and larger.

[c] Includes entire tree aboveground.

Table 137.--Net volume of all trees on timberland by class of timber and species group, Pennyroyal Unit, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	111.9	27.1	415.1	1,114.7	1,668.9	3.8
Upper stem	15.1	4.0	95.8	254.4	369.4	3.6
Total sawtimber trees	127.1	31.1	511.0	1,369.1	2,038.3	3.7
Poletimber trees	34.7	54.4	297.4	608.4	994.9	3.3
Total growing-stock trees	161.7	85.5	808.4	1,977.5	3,033.2	2.9
Rough trees:						
Sawtimber size	1.4	5.5	5.3	21.7	34.0	13.9
Poletimber size	.2	.3	3.1	20.0	23.6	12.2
Total rough trees	1.7	5.7	8.4	41.7	57.5	9.8
Rotten trees:						
Sawtimber size	.3	.5	6.8	26.3	33.8	12.1
Poletimber size	.0	.4	2.5	4.5	7.3	17.0
Total rotten trees	.3	.9	9.3	30.8	41.2	10.6
Salvable dead[a] trees:						
Sawtimber size	.4	.5	.8	4.5	6.1	24.4
Poletimber size	.8	.9	.7	3.6	5.9	24.0
Total salvable dead trees	1.1	1.4	1.5	8.1	12.0	18.0
All classes	164.8	93.5	827.5	2,058.1	3,143.9	2.9
SE	18.8	13.7	6.2	3.6	2.9	

[a] Includes noncommercial species.

Table 138.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Pennyroyal Unit, Kentucky, 1988

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
			All live		
		(In millions of cubic feet)			
Softwoods	15.1	4.2	8.4	228.1	255.8
Hardwoods	32.6	81.0	43.2	2,719.3	2,876.1
Total all live	47.7	85.2	51.6	2,947.4	3,131.9
			Growing stock		
		(In millions of cubic feet)			
Softwoods	15.0	3.7	8.3	220.3	247.3
Hardwoods	30.7	80.0	41.9	2,633.2	2,785.9
Total growing stock	45.8	83.7	50.2	2,853.5	3,033.2
			Sawtimber		
		(In millions of board feet)			
Softwoods	51.3	10.3	18.2	501.5	581.4
Hardwoods	72.1	247.8	92.3	7,898.2	8,310.4
Total sawtimber	123.5	258.1	110.5	8,399.7	8,891.8

Table 139.--Net volume of growing-stock trees on timberland by species and diameter class, Pennyroyal Unit, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Hard pines	16.9	36.9	28.3	28.8	18.9	8.3	2.7	2.1	.0	.0	142.9
Other softwoods[a]	24.6	20.5	7.1	4.7	4.0	2.5	2.5	.0	.0	.0	65.9
Total softwoods	41.5	57.4	35.4	33.5	22.9	10.8	5.2	2.1	.0	.0	208.9
Red maple	7.6	17.0	6.9	4.2	5.4	2.6	2.3	2.1	3.2	7.4	58.8
Sugar maple	30.4	33.7	27.5	20.4	19.4	19.9	17.6	4.4	3.7	.0	177.1
Hickory	30.1	42.8	79.9	52.8	59.0	17.6	16.4	9.6	13.8	.0	322.0
Beech	4.8	11.1	12.3	20.3	25.6	29.0	25.5	15.1	30.3	9.5	183.5
Ash	4.5	10.5	23.4	30.4	16.0	5.6	5.1	2.8	5.1	.7	104.2
Black walnut	4.7	6.5	5.8	10.0	10.1	.0	.0	.0	1.4	.0	38.6
Sweetgum	2.9	2.1	2.5	3.1	3.7	.0	.9	.6	.0	.0	15.8
Yellow-poplar	16.9	32.4	26.9	41.3	26.2	29.0	27.2	17.2	30.9	4.9	252.9
Blackgum	4.0	7.8	3.7	12.8	3.8	1.6	3.7	1.2	.0	.0	38.5
Select white oaks	18.6	40.3	55.3	80.9	55.7	77.6	45.0	7.5	26.8	.0	407.6
Select red oaks	3.8	18.2	15.1	25.8	16.8	20.6	21.6	18.4	18.2	1.4	159.8
Other white oaks	13.4	15.0	24.9	25.9	36.5	33.6	22.2	11.9	6.1	.0	189.5
Other red oaks	16.8	27.2	49.2	39.8	43.4	40.1	32.0	24.3	30.5	4.1	307.6
Basswood	.0	.0	2.6	3.6	.0	2.5	.0	2.7	.0	.0	11.3
Other hardwoods	29.2	37.9	56.4	28.7	22.8	16.7	15.0	8.9	17.4	6.1	239.2
Total hardwoods	187.8	302.5	392.4	400.1	344.4	296.4	234.5	126.8	187.4	34.1	2,506.4
All species	229.2	359.9	427.8	433.6	367.3	307.2	239.7	128.8	187.4	34.1	2,715.2

[a] Includes Eastern redcedar.

Table 140.--Net volume of growing-stock trees on timberland by species and diameter class, Pennyroyal Unit, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	10.9	23.7	30.3	36.2	23.6	14.7	12.0	3.7	5.0	.0	160.1	18.6
Other softwoods[a]	29.2	25.2	12.3	10.2	6.3	2.0	.8	.0	1.2	.0	87.2	13.9
Total softwoods	40.1	49.0	42.7	46.4	29.9	16.7	12.8	3.7	6.2	.0	247.3	13.2
Red maple	12.3	14.1	22.7	7.7	12.1	7.1	4.4	2.8	4.5	1.0	88.5	16.4
Sugar maple	29.0	47.1	48.2	38.1	35.0	22.1	19.7	10.9	7.4	1.6	259.0	9.3
Hickory	22.9	41.9	63.8	69.1	46.1	32.7	20.7	8.9	9.6	.0	315.8	6.4
Beech	3.6	10.9	13.0	18.2	22.6	24.2	21.2	20.6	39.3	12.3	185.8	13.8
Ash	9.8	19.3	20.6	23.5	20.2	10.9	9.0	4.5	6.3	.6	124.6	10.8
Black walnut	4.8	7.6	10.6	5.1	3.7	5.5	.6	1.5	1.1	.0	40.3	20.2
Sweetgum	2.4	6.3	4.9	1.7	4.4	2.1	.6	1.7	.0	.0	24.1	27.3
Yellow-poplar	13.7	26.8	43.1	53.5	47.1	53.6	47.4	34.4	30.6	2.3	352.4	9.3
Blackgum	3.0	8.3	8.8	9.5	6.8	2.9	1.7	1.0	.0	.0	42.0	14.9
Select white oaks	16.4	30.6	48.5	69.8	68.2	59.4	46.6	29.6	38.9	16.2	424.2	8.1
Select red oaks	4.2	12.5	20.0	24.0	23.5	25.0	16.9	19.1	27.1	2.9	175.2	9.0
Other white oaks	7.2	18.9	33.3	34.1	30.0	30.0	21.9	12.1	9.9	1.4	198.7	11.7
Other red oaks	10.9	24.5	38.6	36.3	50.0	32.4	24.2	17.9	28.8	3.3	266.8	9.8
Basswood	.9	2.7	1.0	.5	2.7	1.1	.3	1.8	.4	.0	11.4	32.5
Other hardwoods	38.2	43.2	34.9	36.6	30.6	25.6	16.1	10.7	25.4	15.9	277.2	13.3
Total hardwoods	179.1	314.6	412.1	427.7	403.0	334.4	251.1	177.4	229.0	57.5	2,785.9	3.3
All species	219.2	363.6	454.8	474.1	432.8	351.1	263.9	181.1	235.2	57.5	3,033.2	2.9
SE	5.1	4.9	4.1	4.4	4.5	5.8	6.5	8.6	9.8	30.7	2.9	

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[a] [illegible] cubic feet of eastern redcedar.

Table 141.--Net volume of sawtimber trees on timberland by species and diameter class, Pennyroyal Unit, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Hard pines	107.6	122.4	85.3	35.9	14.0	11.5	.0	.0	376.7
Other softwoods[a]	22.1	14.6	15.3	9.6	11.7	.0	.0	.0	73.3
Total softwoods	129.7	137.1	100.6	45.5	25.7	11.5	.0	.0	450.1
Red maple	-	16.3	24.3	12.0	9.2	12.2	15.1	41.9	130.9
Sugar maple	-	71.1	78.3	85.4	74.4	17.1	16.4	.0	342.6
Hickory	-	193.8	252.4	78.5	73.0	46.7	71.0	.0	715.5
Beech	-	83.1	113.8	135.8	118.6	78.1	160.6	49.7	739.7
Ash	-	94.2	54.6	22.5	19.2	10.1	19.4	2.7	222.6
Black walnut	-	28.4	31.1	.0	.0	.0	5.7	.0	65.1
Sweetgum	-	9.2	13.9	.0	4.1	2.7	.0	.0	29.9
Yellow-poplar	-	142.2	96.4	122.1	110.2	72.4	144.1	23.7	711.1
Blackgum	-	39.4	18.6	7.7	14.6	4.5	.0	.0	84.8
Select white oaks	-	310.8	231.2	348.3	201.0	32.1	127.3	.0	1,250.8
Select red oaks	-	83.6	59.4	78.9	83.4	74.6	77.1	5.4	462.3
Other white oaks	-	89.6	129.3	127.0	84.3	45.1	23.8	.0	499.1
Other red oaks	-	138.9	165.1	161.9	128.9	97.5	130.9	14.2	837.4
Basswood	-	11.9	.0	8.1	.0	6.8	.0	.0	26.8
Other hardwoods	-	128.4	111.8	86.0	90.4	52.9	105.9	37.5	612.9
Total hardwoods	-	1,440.8	1,380.5	1,274.1	1,011.2	552.9	897.2	175.1	6,731.8
All species	129.7	1,577.9	1,481.0	1,319.6	1,037.0	564.4	897.2	175.1	7,181.9

[a] Includes Eastern redcedar.

Table 142.--Net volume of sawtimber trees on timberland by species and diameter class, Pennyroyal Unit, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	94.8	136.7	96.9	63.7	55.9	17.1	24.9	.0	489.9	19.9
Other softwoods[a]	30.1	26.8	19.1	7.9	3.1	.0	4.6	.0	91.5	17.8
Total softwoods	124.8	163.5	115.9	71.6	59.0	17.1	29.5	.0	581.4	17.3
Red maple	-	27.6	48.6	29.2	18.7	12.9	24.8	5.9	167.7	23.4
Sugar maple	-	136.3	144.2	100.2	86.7	53.3	38.9	9.4	568.9	11.6
Hickory	-	251.3	194.9	155.7	99.5	44.5	56.6	.0	802.4	8.4
Beech	-	64.5	97.7	112.5	106.6	104.8	226.0	80.0	792.1	15.4
Ash	-	83.3	78.0	48.8	36.7	21.5	31.9	2.4	302.6	13.5
Black walnut	-	20.4	14.7	24.7	2.9	8.2	5.9	.0	76.8	22.0
Sweetgum	-	5.9	16.0	9.0	2.7	8.0	.0	.0	41.6	39.1
Yellow-poplar	-	192.9	202.4	246.8	226.6	176.8	160.9	14.5	1,220.9	10.6
Blackgum	-	31.6	28.3	11.7	7.8	5.5	.0	.0	84.9	17.9
Select white oaks	-	260.4	293.8	274.6	232.2	152.3	200.2	76.6	1,490.1	9.3
Select red oaks	-	82.8	90.5	106.7	80.5	90.4	142.6	13.7	607.2	10.6
Other white oaks	-	121.6	116.1	127.7	94.2	56.0	45.6	8.0	569.3	13.2
Other red oaks	-	127.3	202.6	140.8	112.3	84.5	146.0	16.5	829.9	10.7
Basswood	-	1.5	12.0	4.8	1.3	9.9	1.8	.0	31.3	36.4
Other hardwoods	-	128.8	125.0	110.4	77.8	50.5	134.3	97.8	724.6	19.2
Total hardwoods	-	1,536.1	1,664.8	1,503.5	1,186.7	878.9	1,215.5	324.8	8,310.4	4.3
All species	124.8	1,699.6	1,780.8	1,575.1	1,245.7	896.0	1,245.1	324.8	8,891.8	4.0
SE	19.8	4.4	4.5	5.9	6.7	8.8	10.2	29.0	4.0	

[a] Includes 86.3 million board feet of Eastern redcedar.

Table 143.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Pennyroyal Unit, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Hard pines	9.9	5.4	46.1	-	61.4	51.5	54.4	270.7	-	376.7
Other softwoods	21.3	.0	.0	.0	21.3	73.3	.0	.0	.0	73.3
Total softwoods	31.2	5.4	46.1	.0	82.8	124.9	54.4	270.7	.0	450.1
Red maple	29.9	21.5	33.9	5.0	90.3	29.9	21.5	56.4	23.1	130.9
Sugar maple	23.4	56.8	77.5	35.5	193.2	25.8	91.9	155.2	69.7	342.6
Hickory	62.8	66.0	78.1	62.2	269.3	68.9	162.3	284.7	199.6	715.5
Beech	23.7	59.5	209.1	250.5	542.8	24.3	63.6	271.9	380.0	739.7
Ash	15.0	28.2	24.8	6.0	73.9	20.7	75.4	95.7	30.9	222.6
Black walnut	3.5	1.2	.7	.2	5.7	3.5	14.4	39.4	7.8	65.1
Sweetgum	.0	3.7	1.6	1.6	6.8	.0	3.7	15.2	11.0	29.9
Yellow-poplar	160.7	84.9	150.7	76.2	472.5	160.7	121.4	231.7	197.3	711.1
Blackgum	2.7	6.1	14.9	3.0	26.8	2.7	15.1	54.1	13.0	84.8
Select white oaks	212.6	152.6	203.3	140.3	708.8	212.6	223.7	491.8	322.6	1,250.8
Select red oaks	123.8	100.2	70.1	25.2	319.3	124.5	117.2	171.6	49.0	462.3
Other white oaks	76.9	89.1	84.0	30.3	280.2	86.3	125.1	205.6	82.2	499.1
Other red oaks	108.1	133.2	174.9	117.2	533.4	114.5	175.4	309.8	237.7	837.4
Basswood	.0	9.2	4.9	.7	14.9	.0	9.2	16.0	1.6	26.8
Other hardwoods	68.8	118.5	117.9	67.5	372.7	83.9	148.2	274.5	106.3	612.9
Total hardwoods	912.0	930.6	1,246.6	821.4	3,910.6	958.4	1,368.1	2,673.5	1,731.8	6,731.8
Percent of hardwood in each grade	23	24	32	21	100	14	20	40	26	100

Table 144.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Pennyroyal Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Hard pines	25.5	25.1	111.1	-	161.6	76.8	81.5	331.7	-	489.9
Other softwoods	15.5	.0	.0	.0	15.5	86.3	1.4	3.0	.9	91.5
Total softwoods	41.0	25.1	111.1	.0	177.2	163.0	82.8	334.7	.9	581.4
Red maple	4.4	9.5	66.1	11.5	91.5	4.4	18.9	116.9	27.6	167.7
Sugar maple	36.3	49.0	121.0	82.1	288.5	46.3	81.4	281.7	159.5	568.9
Hickory	36.9	112.8	130.1	76.4	356.2	39.7	221.7	353.1	187.9	802.4
Beech	18.2	65.9	344.9	200.9	629.9	18.9	65.9	416.8	290.6	792.1
Ash	27.9	51.8	49.6	12.1	141.3	31.9	102.1	132.4	36.1	302.6
Black walnut	7.0	10.6	16.8	7.2	41.7	7.0	20.4	35.6	13.7	76.8
Sweetgum	3.5	3.3	4.9	8.0	19.7	3.5	4.5	16.3	17.4	41.6
Yellow-poplar	115.0	224.6	309.8	176.2	825.6	118.5	277.2	546.2	278.9	1,220.9
Blackgum	4.8	2.3	11.2	6.6	24.9	4.8	14.3	45.2	20.5	84.9
Select white oaks	134.3	270.2	304.8	226.7	936.0	134.3	409.9	562.9	382.9	1,490.1
Select red oaks	72.6	125.1	162.7	73.5	433.9	75.2	151.9	273.3	106.8	607.2
Other white oaks	31.1	107.9	108.8	83.8	331.6	31.1	168.3	237.6	132.3	569.3
Other red oaks	43.7	134.9	178.2	143.3	500.1	43.7	189.5	331.7	265.0	829.9
Basswood	3.3	4.4	9.1	1.0	17.9	3.3	10.2	16.1	1.7	31.3
Other hardwoods	50.8	76.5	245.9	97.4	470.7	52.5	114.2	405.3	152.5	724.6
Total hardwoods	589.9	1,248.7	2,064.1	1,206.8	5,109.4	615.3	1,850.5	3,771.1	2,073.4	8,310.4
Percent of hardwood in each grade	12	24	40	24	100	8	22	45	25	100

Table 145.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Pennyroyal Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Hard pines	48.1	44.3	57.2	-	12.0	161.6	139.1	148.4	183.6	-	18.8	489.9
Other softwoods	2.6	.0	.0	.0	12.9	15.5	25.8	2.7	2.5	.0	60.5	91.5
Total softwoods	50.7	44.3	57.2	.0	24.9	177.2	164.9	151.1	186.2	.0	79.3	581.4
Red maple	7.0	12.0	33.0	5.3	34.1	91.5	7.0	26.0	83.7	12.6	38.5	167.7
Sugar maple	17.2	59.9	102.1	57.8	51.6	288.5	17.2	100.6	271.6	108.4	71.2	568.9
Hickory	74.6	121.8	88.3	30.9	40.6	356.2	74.6	259.1	307.5	81.0	80.2	802.4
Beech	18.4	99.3	232.8	150.4	129.0	629.9	18.4	99.3	306.2	233.5	134.8	792.1
Ash	44.3	40.3	32.6	.0	24.2	141.3	44.3	113.7	114.5	.0	30.2	302.6
Black walnut	6.7	16.8	10.3	4.5	3.3	41.7	6.7	31.6	27.2	7.4	3.9	76.8
Sweetgum	7.5	5.3	2.0	4.8	.0	19.7	7.5	7.4	17.3	7.7	1.6	41.6
Yellow-poplar	194.9	290.4	206.9	64.0	69.4	825.6	194.9	385.2	459.8	107.0	74.1	1,220.9
Blackgum	7.8	1.0	6.0	5.3	4.8	24.9	7.8	19.0	36.8	13.5	7.8	84.9
Select white oaks	183.3	396.0	235.6	54.9	66.1	936.0	183.3	593.7	513.5	111.0	88.6	1,490.1
Select red oaks	81.3	158.4	117.1	27.2	50.0	433.9	81.3	196.5	228.2	44.5	56.7	607.2
Other white oaks	45.4	146.0	76.8	32.2	31.3	331.6	45.4	230.0	206.6	47.3	40.1	569.3
Other red oaks	76.7	191.0	123.2	49.3	59.9	500.1	76.7	274.0	310.6	104.3	64.4	829.9
Basswood	6.7	4.6	6.6	.0	.0	17.9	6.7	14.1	9.1	.0	1.5	31.3
Other hardwoods	72.2	92.5	120.9	66.7	118.5	470.7	72.2	151.7	269.2	94.4	137.1	724.6
Total hardwoods	844.0	1,635.4	1,394.3	553.2	682.6	5,109.4	844.0	2,501.5	3,161.8	972.5	830.6	8,310.4
All species	894.6	1,679.7	1,451.5	553.2	707.6	5,286.6	1,008.8	2,652.6	3,348.0	972.5	909.9	8,891.8

Table 146.--Average annual net change of growing-stock volume on timberland by species and component of change, Pennyroyal Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Eastern redcedar	1,606	1,512	3,118	-895	-201	2,022	-458	1,564
Hard pines	449	2,271	2,719	-673	-20	2,026	-622	1,404
Other softwoods	0	177	177	0	0	177	0	177
Total softwoods	2,054	3,960	6,015	-1,568	-222	4,225	-1,081	3,144
Red maple	1,541	2,879	4,421	-288	-160	3,973	-1,540	2,433
Sugar maple	1,477	7,575	9,053	-793	-155	8,105	-1,395	6,711
Hickory	676	6,175	6,852	-1,599	-400	4,853	-5,356	-503
Beech	313	3,802	4,115	-1,152	-571	2,392	-2,204	188
Ash	507	2,732	3,239	-663	-60	2,515	-845	1,670
Black walnut	159	783	942	-302	0	641	-506	134
Sweetgum	127	1,059	1,186	-55	-86	1,045	-364	681
Yellow-poplar	910	12,403	13,313	-1,345	-83	11,885	-3,742	8,144
Blackgum	86	1,111	1,197	-164	-68	965	-686	279
Select white oaks	1,109	8,253	9,362	-513	-183	8,666	-7,311	1,355
Select red oaks	851	4,388	5,239	-1,397	0	3,842	-2,579	1,263
Other white oaks	355	3,953	4,308	-995	-340	2,973	-2,221	752
Other red oaks	1,000	8,028	9,028	-2,105	-416	6,507	-9,839	-3,333
Basswood	0	65	65	0	-57	8	0	8
Other hardwoods	1,901	6,848	8,749	-1,469	-173	7,107	-3,999	3,108
Total hardwoods	11,013	70,056	81,069	-12,841	-2,751	65,477	-42,588	22,889
All species	13,067	74,017	87,083	-14,408	-2,973	69,702	-43,669	26,033

Table 147.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Pennyroyal Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Eastern redcedar	2,022	-458
Hard pines	2,026	-622
Other softwoods	177	0
Total softwoods	4,225	-1,081
Red maple	3,973	-1,540
Sugar maple	8,105	-1,395
Hickory	4,853	-5,356
Beech	2,392	-2,204
Ash	2,515	-845
Black walnut	641	-506
Sweetgum	1,045	-364
Yellow-poplar	11,885	-3,742
Blackgum	965	-686
Select white oaks	8,666	-7,311
Select red oaks	3,842	-2,579
Other white oaks	2,973	-2,221
Other red oaks	6,507	-9,839
Basswood	8	0
Other hardwoods	7,107	-3,999
Total hardwoods	65,477	-42,588
All species	69,702	-43,669

Table 148.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Pennyroyal Unit, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Eastern redcedar	1,115	-313
Hard pines	9,664	-393
Other softwoods	686	0
Total softwoods	11,464	-706
Red maple	7,689	-4,675
Sugar maple	23,705	-5,174
Hickory	23,027	-15,912
Beech	14,576	-10,290
Ash	8,860	-2,316
Black walnut	2,531	-1,579
Sweetgum	1,762	-800
Yellow-poplar	55,460	-13,718
Blackgum	2,009	-2,007
Select white oaks	49,045	-29,453
Select red oaks	21,352	-9,488
Other white oaks	14,272	-8,524
Other red oaks	30,731	-31,345
Basswood	369	0
Other hardwoods	25,558	-16,419
Total hardwoods	280,947	-151,700
All species	292,411	-152,407

Table 149.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Pennyroyal Unit, Kentucky, 1974-87

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Eastern redcedar	-895	-1,165
Hard pines	-673	-1,133
Total softwoods	-1,568	-2,298
Red maple	-288	-537
Sugar maple	-793	-1,846
Hickory	-1,599	-2,915
Beech	-1,152	-3,984
Ash	-663	-1,806
Black walnut	-302	-324
Sweetgum	-55	0
Yellow-poplar	-1,345	-2,713
Blackgum	-164	-344
Select white oaks	-513	-433
Select red oaks	-1,397	-4,676
Other white oaks	-995	-3,873
Other red oaks	-2,105	-4,781
Other hardwoods	-1,469	-1,085
Total hardwoods	-12,841	-29,318
All species	-14,408	-31,616

Table 150.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Pennyroyal Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	293	1,076	1,369	0	-145	-145
Other public	37	2,327	2,365	-120	-5,324	-5,444
Forest industry	240	1,714	1,953	0	-738	-738
Other private	3,655	60,360	64,015	-961	-36,381	-37,342
All classes	4,225	65,477	69,702	-1,081	-42,588	-43,669

Table 151.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Pennyroyal Unit, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
National Forest	2,064	3,757	5,821	0	-344	-344
Other public	137	9,015	9,153	-185	-15,111	-15,296
Forest industry	1,100	5,286	6,386	0	-3,066	-3,066
Other private	8,163	262,888	271,051	-522	-133,179	-133,701
All classes	11,464	280,947	292,411	-706	-151,700	-152,407

WESTERN COALFIELD UNIT TABLES

Table 152.--Area of timberland by forest type, forest-type group, and stand-size class, Western Coalfield Unit, Kentucky, 1975

(In thousands of acres)

Forest type	Stand-size class				All classes
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked	
Wh. pine/no. red oak/wh. ash	12.6	.0	.0	.0	12.6
Eastern redcedar/hardwood	.0	.0	37.5	.0	37.5
Virginia pine/oak	12.6	12.6	.0	.0	25.2
Loblolly pine/hardwood	.0	.0	12.2	.0	12.2
Oak/pine group	25.2	12.6	49.7	.0	87.5
Post, black, or bear oak	25.2	62.6	50.5	.0	138.3
Chestnut oak	12.6	.0	.0	.0	12.6
White oak/red oak/hickory	124.8	88.1	125.3	.0	338.2
White oak	37.4	12.6	12.6	.0	62.6
Northern red oak	.0	.0	12.6	.0	12.6
Y. poplar/wh. oak/no. red oak	.0	.0	12.6	.0	12.6
Sweetgum/yellow-poplar	.0	.0	12.6	.0	12.6
Yellow-poplar	45.0	.0	12.6	.0	57.6
Scarlet oak	12.6	.0	.0	.0	12.6
Sassafras/persimmon	.0	.0	12.2	.0	12.2
Red maple/central hardwoods	37.4	.0	.0	.0	37.4
Mixed central hardwoods	275.3	214.0	239.4	.0	728.7
Oak/hickory group	570.3	377.4	490.6	.0	1,438.2
Swamp chstnt oak/cherrybrk oak	24.8	.0	24.8	.0	49.7
Oak/gum/cypress group	24.8	.0	24.8	.0	49.7
Black ash/Amer. elm/red maple	37.4	.0	.0	.0	37.4
River birch/sycamore	12.2	12.6	.0	.0	24.8
Willow	.0	.0	12.6	.0	12.6
Sycamore/pecan/American elm	12.6	.0	.0	.0	12.6
American elm/green ash	12.6	25.2	12.6	.0	50.4
Elm/ash/red maple group	74.8	37.8	25.3	.0	137.9
Sugar maple/beech/yellow birch	37.0	12.2	.0	.0	49.3
Red maple/northern hardwoods	.0	.0	12.6	.0	12.6
Mixed northern hardwoods	.0	12.6	57.7	.0	70.3
Northern hardwoods group	37.0	24.8	70.3	.0	132.2
All forest types	732.2	452.6	660.7	.0	1,845.4

Table 153.--Area of timberland by forest type, forest-type group, and stand-size class, Western Coalfield Unit, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Loblolly pine	4.7	6.8	28.6	.0	40.1	[illegible]
Virginia pine	3.6	.0	.0	.0	3.6	100.0
Eastern redcedar	.0	6.1	8.7	.0	14.8	[illegible]
Loblolly/shortleaf group	8.3	12.9	37.3	.0	58.5	[illegible]
Wh. pine/no. red oak/wh. ash	10.4	.0	.0	.0	10.4	100.0
Eastern redcedar/hardwood	15.4	36.7	14.7	.0	66.8	[illegible]
Virginia pine/oak	19.8	.0	6.8	.0	26.6	[illegible]
Oak/pine group	45.7	36.7	21.5	.0	103.8	[illegible]
Post, black, or bear oak	38.8	20.4	11.3	.0	70.6	[illegible]
Chestnut oak	.0	.0	5.4	.0	5.4	100.0
White oak/red oak/hickory	151.2	78.1	29.7	.0	259.0	[illegible]
White oak	65.8	25.7	6.5	.0	98.0	[illegible]
Northern red oak	9.6	.0	.0	.0	9.6	100.0
Y. poplar/wh. oak/no. red oak	21.9	.0	.0	.0	21.9	50.5
Black locust	.0	6.7	8.8	.0	15.5	[illegible]
Sweetgum/yellow-poplar	6.7	14.1	6.9	.0	27.7	[illegible]
Yellow-poplar	15.4	5.8	.0	.0	21.2	[illegible]
Hawthorn/reverting field	17.3	4.6	80.5	.0	102.5	[illegible]
Scarlet oak	6.0	.0	.0	.0	6.0	100.0
Sassafras/persimmon	.0	.0	8.0	.0	8.0	100.0
Red maple/central hardwoods	16.4	.0	.0	.0	16.4	71.8
Mixed central hardwoods	407.8	209.5	82.8	.0	700.1	7.9
Oak/hickory group	756.9	364.9	239.9	.0	1,361.7	[illegible]
Swamp chstnt oak/cherrybrk oak	29.6	5.2	13.2	.0	48.0	38.5
Sweetbay/swamp tupelo/rd maple	4.7	.0	.0	.0	4.7	100.0
Oak/gum/cypress group	34.3	5.2	13.2	.0	52.7	36.2
Black ash/Amer. elm/red maple	63.4	14.7	8.1	.0	86.2	27.1
Red maple(lowland)	6.7	.0	.0	.0	6.7	100.0
River birch/sycamore	9.7	11.3	.0	.0	21.0	[illegible]
Cottonwood	.0	7.7	.0	.0	7.7	100.0
Sycamore/pecan/American elm	22.7	.0	7.9	.0	30.6	49.2
American elm/green ash	5.6	.0	.0	.0	5.6	100.0
Elm/ash/red maple group	108.1	33.6	16.0	.0	157.7	19.8
Sugar maple/beech/yellow birch	48.9	27.3	6.7	.0	82.9	30.1
Red maple/northern hardwoods	.0	.0	11.8	.0	11.8	100.0
Pin cherry/reverting field	5.7	.0	.0	.0	5.7	100.0
Mixed northern hardwoods	.0	6.1	6.6	.0	12.7	70.8
Northern hardwoods group	54.5	33.4	25.1	.0	113.1	26.2
All forest types	1,007.7	486.7	353.0	.0	1,847.5	2.7
SE	5.7	10.2	13.3	.0	2.7	

Table 154.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Western Coalfield Unit, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9
Eastern redcedar	57,849	18,791	6,645	2,711	940	259	139
Hard pines	8,448	8,157	3,930	1,588	957	271	202
Other softwoods	0	0	0	94	0	0	0
Total softwoods	66,296	26,949	10,575	4,393	1,897	530	341
Red maple	31,787	5,025	3,064	1,390	528	714	225
Sugar maple	84,352	17,504	8,266	3,929	2,116	1,299	1,223
Hickory	33,073	7,379	9,727	7,204	5,746	3,724	2,106
Beech	11,557	0	950	561	526	303	538
Ash	53,100	20,106	5,504	2,900	1,577	1,501	482
Black walnut	0	0	1,197	343	585	179	178
Sweetgum	34,778	1,122	2,815	2,090	1,421	956	695
Yellow-poplar	13,447	6,273	2,186	1,225	1,011	1,123	927
Blackgum	17,176	5,637	1,497	1,445	1,111	552	309
Select white oaks	8,719	11,982	5,404	3,085	2,801	2,536	1,905
Select red oaks	6,535	3,317	2,207	1,077	1,335	1,316	825
Other white oaks	15,062	6,187	2,252	2,840	2,197	1,345	845
Other red oaks	13,398	9,975	3,860	3,059	2,322	1,833	1,479
Other hardwoods	181,266	62,560	19,634	9,719	5,072	2,760	1,599
Total hardwoods	504,250	157,069	68,563	40,866	28,349	20,141	13,337
All species	570,546	184,017	79,139	45,260	30,246	20,672	13,678
SE	7.8	10.5	5.6	5.2	5.3	5.0	5.0

Table 154.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	0	30	9	20	0	87,393	22.0
Hard pines	106	109	13	0	0	23,782	34.2
Other softwoods	0	0	0	44	0	139	100.0
Total softwoods	106	139	23	64	0	111,314	18.9
Red maple	226	71	85	195	19	43,329	25.5
Sugar maple	519	201	115	105	10	119,640	13.4
Hickory	800	384	247	107	13	70,512	13.6
Beech	267	289	183	138	5	15,317	43.9
Ash	176	124	113	43	6	85,632	22.7
Black walnut	52	37	25	13	0	2,609	24.6
Sweetgum	340	167	63	61	0	44,509	21.9
Yellow-poplar	624	340	188	212	17	27,573	26.7
Blackgum	171	65	29	79	0	28,072	23.9
Select white oaks	1,554	994	347	366	41	39,735	18.7
Select red oaks	442	403	197	293	61	18,009	25.8
Other white oaks	723	189	104	59	0	31,803	25.9
Other red oaks	1,329	809	402	395	76	38,939	16.7
Other hardwoods	865	567	254	331	71	284,697	10.5
Total hardwoods	8,090	4,641	2,353	2,397	319	850,377	6.0
All species	8,196	4,780	2,376	2,462	319	961,691	5.8
SE	6.4	7.7	9.8	11.2	20.7	5.8	

Table 155.--Net dry weight of all live trees on timberland by species and diameter class, Western Coalfield Unit, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Eastern redcedar	764	482	391	244	105	74	22	27	12	35	2,155	16.1
Hard pines	288	263	201	217	94	101	72	101	17	0	1,355	27.2
Other softwoods	0	0	17	0	0	0	0	0	0	95	112	100.0
Total softwoods	1,052	745	608	462	199	175	93	129	29	130	3,622	14.2
Red maple	360	270	237	161	325	167	194	85	145	621	2,565	21.0
Sugar maple	1,249	1,083	1,028	943	884	1,110	636	324	223	410	7,890	12.5
Hickory	476	1,065	1,558	2,274	2,405	2,031	1,071	754	593	529	12,755	7.1
Beech	107	123	143	214	202	468	339	428	329	518	2,871	23.7
Ash	1,241	588	629	563	784	397	173	185	176	148	4,885	10.6
Black walnut	0	111	75	184	72	181	48	45	38	36	790	23.4
Sweetgum	219	297	401	469	497	525	341	227	113	191	3,280	19.3
Yellow-poplar	207	138	195	263	447	546	517	385	260	569	3,527	13.6
Blackgum	265	153	287	387	289	243	185	83	49	209	2,150	16.9
Select white oaks	345	437	557	875	1,363	1,495	1,732	1,493	711	1,599	10,608	10.9
Select red oaks	133	187	228	486	770	739	562	683	436	1,506	5,730	14.4
Other white oaks	283	242	602	799	844	692	849	285	211	176	4,985	13.9
Other red oaks	333	372	629	783	1,006	1,189	1,456	1,163	717	1,845	9,494	8.4
Other commercial hardwoods	2,873	1,905	1,815	1,753	1,547	1,301	983	833	524	1,664	15,197	11.8
Noncommercial hardwoods	482	145	133	209	168	65	0	0	27	0	1,230	21.4
Total hardwoods	8,571	7,118	8,517	10,365	11,605	11,149	9,087	6,973	4,553	10,021	87,959	3.4
All species	9,623	7,863	9,125	10,826	11,804	11,324	9,180	7,102	4,581	10,151	91,581	3.3
SE	8.9	5.2	5.0	5.3	4.9	5.0	6.3	7.6	9.6	10.9	3.3	

Table 156.--Net dry weight[a] of all trees on timberland by class of material and species group, Western Coalfield Unit, Kentucky, 1988

(In thousands of tons)

Class of material	Species group		All groups	SE
	Softwoods	Hardwoods		
Sawtimber trees:				
Sawlog portion	777	31,450	32,227	4.4
Upper stem	105	7,114	7,219	4.0
Total sawtimber trees	882	38,564	39,446	4.3
Poletimber trees	897	17,663	18,560	4.1
All growing stock	1,779	56,227	58,006	3.5
Rough cull trees[b]	57	2,047	2,104	12.7
Rotten cull trees[b]	0	611	611	16.4
Salvable dead trees[c]	19	1,558	1,577	13.5
Saplings[c]	1,052	8,571	9,623	8.9
Tops - growing stock	712	19,614	20,326	3.3
Tops - rough and rotten	21	889	910	10.0
All nongrowing stock	1,862	33,291	35,152	3.7
All classes	3,641	89,517	93,158	3.2
SE	14.2	3.4	3.2	

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[a] Includes bark and sound cull; excludes rotten cull.

[b] Bole portion of trees 5.0 inches d.b.h. and larger.

[c] Includes entire tree aboveground.

Table 157.--Net volume of all trees on timberland by class of timber and species group, Western Coalfield Unit, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	24.2	13.5	358.7	822.5	1,218.8	4.4
Upper stem	3.1	2.0	83.8	189.4	278.3	4.1
Total sawtimber trees	27.3	15.5	442.5	1,011.9	1,497.2	4.3
Poletimber trees	19.2	29.9	261.0	489.0	799.1	4.4
Total growing-stock trees	46.5	45.4	703.5	1,500.9	2,296.3	3.6
Rough trees:						
Sawtimber size	.2	1.1	12.3	20.2	33.9	16.4
Poletimber size	.0	.2	3.5	11.4	15.1	19.0
Total rough trees	.2	1.4	15.8	31.6	49.0	13.8
Rotten trees:						
Sawtimber size	.0	.0	3.4	9.7	13.1	19.5
Poletimber size	.0	.0	.6	.2	.8	35.6
Total rotten trees	.0	.0	4.0	9.9	14.0	18.9
Salvable dead[a] trees:						
Sawtimber size	.2	.0	3.8	14.9	18.9	19.7
Poletimber size	.0	.5	1.0	12.5	14.1	17.0
Total salvable dead trees	.2	.5	4.9	27.4	32.9	14.8
All classes	46.9	47.2	728.3	1,569.8	2,392.2	3.6
SE	28.4	15.4	9.5	4.2	3.6	

[a] Includes noncommercial species.

Table 158.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Western Coalfield Unit, Kentucky, 1988

Species group	Ownership class: National Forest	Other public	Forest industry	Other private	All classes
	All live				
	(In millions of cubic feet)				
Softwoods	.0	4.2	.1	89.1	93.5
Hardwoods	.0	53.7	11.0	2,201.2	2,265.8
Total all live	.0	57.9	11.1	2,290.2	2,359.3
	Growing stock				
	(In millions of cubic feet)				
Softwoods	.0	4.2	.2	87.5	91.9
Hardwoods	.0	51.7	10.6	2,142.0	2,204.4
Total growing stock	.0	56.0	10.8	2,229.5	2,296.3
	Sawtimber				
	(In millions of board feet)				
Softwoods	.0	16.9	.0	147.7	164.7
Hardwoods	.0	156.3	18.9	6,372.4	6,547.6
Total sawtimber	.0	173.2	18.9	6,520.2	6,712.3

Table 159.--Net volume of growing-stock trees on timberland by species and diameter class, Western Coalfield Unit, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	8.8	3.5	6.6	1.0	.9	.0	.0	.0	.0	.0	20.8
Hard pines	.0	1.9	15.2	12.3	.0	6.0	.0	.0	.0	.0	35.4
Other softwoods	.0	.5	.0	.0	.0	.0	.0	1.0	3.9	.0	5.5
Total softwoods	8.8	5.9	21.9	13.3	.9	6.0	.0	1.0	3.9	.0	61.7
Red maple	3.6	6.1	19.7	11.2	19.0	11.2	9.4	1.3	6.7	5.0	93.2
Sugar maple	13.1	19.1	19.5	13.7	14.2	18.6	14.7	3.9	5.8	.0	122.6
Hickory	36.4	33.3	68.4	51.8	37.0	31.5	22.9	6.5	12.9	1.1	301.8
Beech	3.6	1.5	6.3	15.4	9.5	15.7	4.2	2.1	18.5	6.4	83.1
Ash	13.9	15.0	15.2	14.8	7.9	10.5	3.9	2.3	2.4	.0	86.0
Black walnut	1.1	3.0	3.2	4.9	2.5	.8	.9	.0	.9	.0	17.2
Sweetgum	3.7	14.0	17.1	21.6	11.1	4.2	3.2	1.7	2.6	.0	79.2
Yellow-poplar	2.8	2.9	13.2	9.4	13.5	10.2	7.2	6.1	9.3	3.5	78.3
Blackgum	4.6	5.6	11.7	6.8	6.1	3.7	2.8	.0	1.9	.0	43.2
Select white oaks	10.8	25.1	42.2	43.5	48.4	32.7	19.6	10.5	22.4	.0	255.1
Select red oaks	4.6	8.6	12.7	14.8	12.4	26.6	6.2	8.7	29.9	.9	125.5
Other white oaks	9.5	15.1	20.2	24.9	19.5	11.0	7.6	1.5	2.9	2.6	114.7
Other red oaks	16.9	16.6	24.9	39.9	35.8	28.4	17.5	11.2	34.3	11.1	236.5
Other hardwoods	65.2	61.9	50.4	38.6	27.9	15.3	18.3	20.6	13.8	5.6	317.6
Total hardwoods	189.7	227.8	325.0	311.4	264.6	220.4	138.4	76.4	164.3	36.0	1,954.1
All species	198.5	233.6	346.8	324.7	265.5	226.5	138.4	77.5	168.2	36.0	2,015.8

Table 160.--Net volume of growing-stock trees on timberland by species and diameter class, Western Coalfield Unit, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	16.1	13.1	7.5	2.8	2.6	.0	.7	.3	.7	.0	43.8	16.7
Hard pines	10.5	8.7	9.0	3.8	3.9	2.9	3.5	.7	.0	.0	42.8	29.5
Other softwoods	.0	.7	.0	.0	.0	.0	.0	.0	4.6	.0	5.3	100.0
Total softwoods	26.6	22.5	16.4	6.6	6.4	2.9	4.2	1.0	5.2	.0	91.9	16.4
Red maple	9.6	8.8	6.7	13.3	5.1	7.2	3.0	4.3	15.0	3.0	76.1	22.9
Sugar maple	23.0	25.6	24.8	23.5	31.6	16.2	9.1	6.3	8.4	1.0	169.6	15.0
Hickory	28.1	45.5	67.3	69.0	53.1	25.4	16.8	11.9	8.5	2.2	327.7	7.2
Beech	2.4	3.9	6.9	6.0	14.4	9.4	12.5	9.8	9.7	.9	75.9	26.4
Ash	16.5	18.2	19.0	27.2	13.5	5.6	5.4	5.5	2.9	1.0	114.8	11.2
Black walnut	2.6	2.0	5.6	2.4	3.4	1.5	1.4	.9	.7	.0	20.5	24.2
Sweetgum	8.8	12.9	15.5	16.6	16.7	10.3	6.6	2.8	4.4	.0	94.7	20.6
Yellow-poplar	5.5	9.1	13.1	22.9	26.7	25.3	17.4	11.3	18.4	2.9	152.5	14.3
Blackgum	4.1	8.7	12.0	8.6	6.6	5.4	2.5	1.4	5.4	.0	54.8	17.9
Select white oaks	14.8	18.9	28.6	41.1	42.9	47.3	38.3	15.7	23.2	4.9	275.8	11.4
Select red oaks	5.3	7.1	14.4	21.7	19.6	14.1	16.4	10.1	20.3	7.7	136.9	13.4
Other white oaks	6.6	17.2	21.5	20.7	17.5	20.0	6.7	5.0	3.5	.0	118.6	14.4
Other red oaks	10.6	19.8	24.1	30.2	35.2	40.9	33.2	19.2	28.2	10.2	251.7	8.8
Other hardwoods	46.4	54.3	53.8	43.5	37.2	27.9	24.1	12.7	25.2	9.9	335.0	15.3
Total hardwoods	184.5	252.1	313.4	346.6	323.4	256.5	193.4	117.0	173.7	43.7	2,204.4	3.7
All species	211.1	274.6	329.8	353.3	329.8	259.4	197.6	118.0	178.9	43.7	2,296.3	3.6
SE	5.8	5.3	5.4	5.1	5.3	6.5	7.7	9.9	11.8	20.3	3.6	

Table 161.--Net volume of sawtimber trees on timberland by species and diameter class, Western Coalfield Unit, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Eastern redcedar	22.7	4.6	3.8	.0	.0	.0	.0	.0	31.1
Hard pines	37.1	32.2	.0	16.5	.0	.0	.0	.0	85.8
Other softwoods	.0	.0	.0	.0	.0	4.3	22.0	.0	26.3
Total softwoods	59.9	36.8	3.8	16.5	.0	4.3	22.0	.0	143.3
Red maple	-	43.0	75.0	46.4	36.2	6.2	30.1	28.3	265.2
Sugar maple	-	48.4	50.1	73.5	58.1	14.4	25.0	.0	269.6
Hickory	-	174.9	130.9	121.1	90.9	25.5	53.9	5.0	602.2
Beech	-	70.0	43.1	79.1	21.3	8.5	100.4	35.8	358.1
Ash	-	62.5	32.8	49.6	17.1	12.5	10.6	.0	185.2
Black walnut	-	28.4	13.6	4.7	5.5	.0	6.4	.0	58.5
Sweetgum	-	71.6	37.1	15.3	11.1	7.2	10.8	.0	153.0
Yellow-poplar	-	31.8	46.2	39.0	27.9	24.5	38.2	16.3	223.9
Blackgum	-	25.2	22.8	15.8	12.3	.0	9.4	.0	85.5
Select white oaks	-	180.8	222.1	156.0	94.3	48.2	113.2	.0	814.6
Select red oaks	-	49.4	43.9	105.0	23.7	29.6	124.2	3.4	379.1
Other white oaks	-	86.5	73.5	43.1	29.8	4.5	10.9	12.9	261.3
Other red oaks	-	151.0	149.8	122.5	78.7	49.3	163.5	55.1	769.9
Other hardwoods	-	167.8	136.3	73.7	97.1	109.9	73.9	37.4	696.1
Total hardwoods	-	1,191.3	1,077.2	944.8	603.8	340.4	770.6	194.2	5,122.3
All species	59.9	1,228.1	1,081.0	961.3	603.8	344.7	792.6	194.2	5,265.6

Table 162.--Net volume of sawtimber trees on timberland by species and diameter class, Western Coalfield Unit, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Eastern redcedar	22.1	8.3	9.6	.0	3.3	1.2	2.4	.0	46.8	24.9
Hard pines	30.9	15.1	16.2	13.3	16.3	3.2	.0	.0	95.0	34.4
Other softwoods	.0	.0	.0	.0	.0	.0	22.8	.0	22.8	100.0
Total softwoods	53.0	23.4	25.8	13.3	19.5	4.4	25.2	.0	164.7	22.6
Red maple	-	50.0	22.1	33.9	14.5	19.3	68.4	17.8	225.9	26.8
Sugar maple	-	93.2	136.5	72.1	41.0	32.2	41.9	4.2	421.1	19.4
Hickory	-	289.6	237.5	115.6	81.7	60.6	47.9	10.7	843.6	9.6
Beech	-	25.7	64.4	46.9	64.2	50.3	58.1	4.8	314.4	28.0
Ash	-	112.1	62.3	26.1	23.5	27.6	15.2	6.1	272.9	14.5
Black walnut	-	8.3	14.5	7.7	7.0	4.7	3.6	.0	45.7	29.4
Sweetgum	-	63.1	69.3	45.9	30.7	14.2	18.1	.0	241.3	20.8
Yellow-poplar	-	94.6	117.9	120.6	85.0	58.2	96.9	18.5	591.7	15.8
Blackgum	-	33.3	26.9	24.1	11.7	6.6	25.3	.0	127.9	24.1
Select white oaks	-	167.0	188.1	216.2	186.9	74.3	117.8	25.5	975.9	12.3
Select red oaks	-	82.1	81.9	59.4	75.5	47.9	101.6	42.1	490.6	16.4
Other white oaks	-	80.1	67.7	88.3	29.1	26.0	17.1	.0	308.4	15.1
Other red oaks	-	111.1	143.5	176.1	152.0	89.1	140.5	58.7	871.0	10.3
Other hardwoods	-	160.2	159.5	127.3	117.3	63.6	133.2	56.1	817.2	20.0
Total hardwoods	-	1,370.4	1,392.2	1,160.1	920.4	574.4	885.7	244.4	6,547.6	4.7
All species	53.0	1,393.9	1,418.0	1,173.4	939.9	578.9	910.9	244.4	6,712.3	4.6
SE	26.7	5.2	5.4	6.6	7.9	10.1	11.7	20.2	4.6	

Table 163.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Western Coalfield Unit, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	.0	-	-	-	.0	31.1	-	-	-	31.1
Hard pines	.0	.0	16.5	-	16.5	.0	.0	85.8	-	85.8
Other softwoods	2.3	.4	14.8	8.9	26.3	2.3	.4	14.8	8.9	26.3
Total softwoods	2.3	.4	31.3	8.9	42.8	33.4	.4	100.6	8.9	143.3
Red maple	9.1	20.0	91.0	27.1	147.2	9.1	33.5	164.2	58.4	265.2
Sugar maple	18.9	35.9	93.6	22.6	171.1	20.2	44.8	155.4	49.1	269.6
Hickory	32.5	78.7	127.3	57.9	296.4	34.4	99.8	326.9	141.1	602.2
Beech	2.0	16.2	117.6	109.4	245.1	2.6	23.1	157.6	174.8	358.1
Ash	24.2	25.9	31.1	8.5	89.8	26.3	37.1	96.4	25.4	185.2
Black walnut	10.3	3.5	2.2	.7	16.6	10.3	18.6	24.6	5.1	58.5
Sweetgum	8.9	2.9	18.5	14.1	44.3	11.4	20.7	77.8	43.1	153.0
Yellow-poplar	34.0	41.9	50.8	19.1	145.9	34.0	50.1	102.5	37.2	223.9
Blackgum	5.2	6.8	21.7	3.8	37.5	5.2	14.1	55.8	10.4	85.5
Select white oaks	82.0	84.0	159.6	86.2	411.8	95.4	154.2	385.7	179.4	814.6
Select red oaks	45.5	121.2	89.4	29.8	285.9	45.5	138.5	156.7	38.4	379.1
Other white oaks	16.8	21.1	39.0	24.3	101.2	18.9	39.3	140.8	62.3	261.3
Other red oaks	110.9	109.8	158.0	90.4	469.1	119.8	145.7	315.5	188.8	769.9
Other hardwoods	52.0	86.1	210.2	43.6	392.0	66.9	124.5	409.1	95.6	696.1
Total hardwoods	452.3	654.2	1,209.8	537.5	2,853.8	499.9	944.0	2,569.1	1,109.2	5,122.3
Percent of hardwood in each grade	16	23	42	19	100	10	18	50	22	100

Table 164.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Western Coalfield Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Eastern redcedar	6.8	-	-	-	6.8	46.8	-	-	-	46.8
Hard pines	.0	2.5	30.3	-	32.8	5.7	5.0	84.4	-	95.0
Other softwoods	2.3	7.4	10.7	2.4	22.8	2.3	7.4	10.7	2.4	22.8
Total softwoods	9.1	9.9	41.0	2.4	62.4	54.9	12.3	95.1	2.4	164.7
Red maple	.0	12.5	92.7	48.6	153.8	.0	14.8	138.5	72.6	225.9
Sugar maple	29.0	19.5	86.6	56.3	191.4	34.0	54.5	197.6	135.0	421.1
Hickory	33.6	88.9	118.5	75.5	316.5	33.6	185.1	410.5	214.4	843.6
Beech	.3	.0	73.1	150.8	224.3	.5	.0	97.2	216.7	314.4
Ash	9.9	38.2	37.1	13.3	98.5	16.5	76.5	132.8	47.2	272.9
Black walnut	3.1	5.2	12.9	1.7	22.9	3.1	9.6	27.3	5.6	45.7
Sweetgum	5.9	18.8	39.3	44.9	109.0	5.9	41.4	103.2	90.7	241.3
Yellow-poplar	54.8	62.7	172.0	89.7	379.2	56.2	82.0	278.3	175.2	591.7
Blackgum	6.6	11.9	43.8	5.4	67.7	6.6	14.5	84.9	21.9	127.9
Select white oaks	85.9	140.7	213.4	180.8	620.7	85.9	216.0	396.2	277.9	975.9
Select red oaks	61.3	88.7	124.1	52.4	326.6	65.0	114.5	217.2	93.9	490.6
Other white oaks	3.8	45.4	61.2	50.1	160.5	3.8	59.7	143.9	101.0	308.4
Other red oaks	61.2	115.2	250.4	189.6	616.4	62.9	151.9	372.1	284.2	871.0
Other hardwoods	26.3	113.9	262.7	94.7	497.5	27.6	138.1	463.5	188.0	817.2
Total hardwoods	381.9	761.4	1,587.7	1,054.0	3,785.0	401.6	1,158.5	3,063.1	1,924.4	6,547.6
Percent of hardwood in each grade	10	20	42	28	100	6	18	47	29	100

Table 165.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Western Coalfield Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Eastern redcedar	3.3	-	-	-	3.6	6.8	34.9	-	-	-	11.9	46.8
Hard pines	.0	5.1	25.1	-	2.6	32.8	10.8	8.6	71.2	-	4.5	95.0
Other softwoods	4.4	13.9	4.6	.0	.0	22.8	4.4	13.9	4.6	.0	.0	22.8
Total softwoods	7.6	18.9	29.7	.0	6.2	62.4	50.1	22.4	75.7	.0	16.5	164.7
Red maple	.0	18.7	49.3	40.4	45.4	153.8	.0	18.7	93.0	58.1	56.1	225.9
Sugar maple	38.0	14.7	86.7	41.7	10.2	191.4	38.0	61.4	200.8	102.2	18.7	421.1
Hickory	72.8	98.5	86.0	32.2	27.0	316.5	72.8	236.8	399.1	92.3	42.6	843.6
Beech	.0	.0	35.0	143.7	45.6	224.3	.0	.0	54.0	208.8	51.6	314.4
Ash	15.8	29.0	31.3	3.9	18.5	98.5	15.8	83.2	135.9	12.0	26.0	272.9
Black walnut	2.3	9.0	7.0	.0	4.7	22.9	2.3	15.6	18.9	1.7	7.3	45.7
Sweetgum	9.6	36.6	39.1	13.7	9.9	109.0	9.6	76.2	117.9	22.5	15.1	241.3
Yellow-poplar	100.9	74.7	150.0	41.5	12.0	379.2	100.9	98.2	276.2	100.3	16.0	591.7
Blackgum	10.7	11.7	28.5	.0	16.8	67.7	10.7	15.6	69.0	10.0	22.6	127.9
Select white oaks	108.7	212.5	185.8	11.9	101.9	620.7	108.7	318.0	391.1	48.9	109.3	975.9
Select red oaks	66.6	110.8	88.3	13.7	47.2	326.6	66.6	148.4	180.7	40.8	54.1	490.6
Other white oaks	5.9	63.2	55.6	30.4	5.5	160.5	5.9	82.2	151.0	59.8	9.5	308.4
Other red oaks	102.8	161.0	240.5	66.0	46.1	616.4	102.8	218.1	391.5	106.2	52.4	871.0
Other hardwoods	40.6	152.0	172.2	52.3	80.4	497.5	40.6	186.3	374.2	110.9	105.2	817.2
Total hardwoods	574.6	992.3	1,255.1	491.6	471.3	3,785.0	574.6	1,558.6	2,853.4	974.4	586.6	6,547.6
All species	582.3	1,011.3	1,284.8	491.6	477.4	3,847.4	624.7	1,581.1	2,929.1	974.4	603.1	6,712.3

Table 166.--Average annual net change of growing-stock volume on timberland by species and component of change, Western Coalfield Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Eastern redcedar	1,093	916	2,009	-106	-55	1,848	-60	1,788
Hard pines	485	384	869	0	0	869	-287	582
Other softwoods	0	102	102	0	0	102	-121	-19
Total softwoods	1,577	1,403	2,980	-106	-55	2,819	-468	2,351
Red maple	200	1,904	2,104	-152	0	1,952	-3,291	-1,339
Sugar maple	1,637	3,959	5,597	-414	-213	4,970	-1,311	3,659
Hickory	565	7,679	8,243	-1,921	-219	6,103	-4,080	2,023
Beech	243	1,259	1,502	-335	-364	802	-1,363	-561
Ash	1,458	3,499	4,956	-692	-76	4,189	-1,947	2,242
Black walnut	663	384	1,048	-303	0	745	-490	255
Sweetgum	1,321	2,527	3,847	0	-46	3,802	-2,591	1,210
Yellow-poplar	1,678	6,794	8,473	-958	0	7,514	-1,737	5,777
Blackgum	321	1,311	1,631	-362	-65	1,205	-304	901
Select white oaks	986	6,651	7,637	-775	-118	6,745	-5,138	1,607
Select red oaks	553	4,138	4,691	-929	-109	3,653	-2,768	884
Other white oaks	56	2,723	2,779	-955	-135	1,690	-1,385	305
Other red oaks	739	7,956	8,694	-1,464	-130	7,100	-5,917	1,183
Other hardwoods	3,187	5,980	9,167	-3,757	-185	5,225	-3,869	1,357
Total hardwoods	13,607	56,764	70,370	-13,017	-1,659	55,694	-36,191	19,503
All species	15,184	58,166	73,351	-13,123	-1,714	58,513	-36,659	21,854

Table 167.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Western Coalfield Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Eastern redcedar	1,848	-60
Hard pines	869	-287
Other softwoods	102	-121
Total softwoods	2,819	-468
Red maple	1,952	-3,291
Sugar maple	4,970	-1,311
Hickory	6,103	-4,080
Beech	802	-1,363
Ash	4,189	-1,947
Black walnut	745	-490
Sweetgum	3,802	-2,591
Yellow-poplar	7,514	-1,737
Blackgum	1,205	-304
Select white oaks	6,745	-5,138
Select red oaks	3,653	-2,768
Other white oaks	1,690	-1,385
Other red oaks	7,100	-5,917
Other hardwoods	5,225	-3,869
Total hardwoods	55,694	-36,191
All species	58,513	-36,659

Table 168.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Western Coalfield Unit, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Eastern redcedar	1,436	-210
Hard pines	1,677	-961
Other softwoods	426	-700
Total softwoods	3,539	-1,871
Red maple	9,727	-12,785
Sugar maple	15,267	-3,464
Hickory	33,022	-14,217
Beech	3,170	-6,575
Ash	11,916	-5,084
Black walnut	766	-1,765
Sweetgum	12,047	-5,169
Yellow-poplar	35,849	-7,198
Blackgum	4,218	-916
Select white oaks	33,547	-20,983
Select red oaks	20,417	-11,733
Other white oaks	8,884	-5,216
Other red oaks	30,473	-22,591
Other hardwoods	17,736	-8,305
Total hardwoods	237,040	-126,001
All species	240,579	-127,872

Table 169.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Western Coalfield Unit, Kentucky, 1974-87

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Eastern redcedar	-106	0
Total softwoods	-106	0
Red maple	-152	-356
Sugar maple	-414	-1,236
Hickory	-1,921	-3,101
Beech	-335	-1,627
Ash	-692	-1,508
Black walnut	-303	-731
Yellow-poplar	-958	-2,761
Blackgum	-362	-495
Select white oaks	-775	-2,098
Select red oaks	-929	-2,567
Other white oaks	-955	-1,891
Other red oaks	-1,464	-4,801
Other hardwoods	-3,757	-9,927
Total hardwoods	-13,017	-33,100
All species	-13,123	-33,100

Table 170.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Western Coalfield Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	21	1,870	1,891	0	-862	-862
Other private	2,798	53,824	56,623	-468	-35,329	-35,798
All classes	2,819	55,694	58,513	-468	-36,191	-36,659

Table 171.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Western Coalfield Unit, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	0	8,289	8,289	0	-3,102	-3,102
Other private	3,539	228,751	232,290	-1,871	-122,899	-124,770
All classes	3,539	237,040	240,579	-1,871	-126,001	-127,872

WESTERN
UNIT TABLES

Table 172.--Area of timberland by forest type, forest-type group, and stand-size class, Western Unit, Kentucky, 1975

(In thousands of acres)

Forest type	Stand-size class				All classes
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked	
Eastern redcedar	.0	.0	6.8	.0	6.8
Loblolly/shortleaf group	.0	.0	6.8	.0	6.8
Eastern redcedar/hardwood	.0	.0	6.8	.0	6.8
Loblolly pine/hardwood	.0	6.7	6.4	.0	13.1
Oak/pine group	.0	6.7	13.2	.0	19.9
Post, black, or bear oak	13.5	27.1	6.7	.0	47.3
Chestnut oak	13.6	.0	.0	.0	13.6
White oak/red oak/hickory	54.5	27.1	27.0	.0	108.6
White oak	27.2	6.7	.0	.0	34.0
Y. poplar/wh. oak/no. red oak	.0	6.7	.0	.0	6.7
Sweetgum/yellow-poplar	.0	.0	6.8	.0	6.8
Scarlet oak	.0	.0	13.4	.0	13.4
Sassafras/persimmon	.0	.0	33.9	.0	33.9
Mixed central hardwoods	115.6	54.0	87.5	.0	257.1
Oak/hickory group	224.4	121.7	175.4	.0	521.5
Swamp chstnt oak/cherrybrk oak	6.7	6.8	.0	.0	13.6
Sweetgm/nuttall oak/willow oak	6.9	.0	.0	.0	6.9
Oak/gum/cypress group	13.6	6.8	.0	.0	20.4
Black ash/Amer. elm/red maple	13.6	13.5	27.1	.0	54.2
Red maple(upland)	.0	.0	13.7	.0	13.7
River birch/sycamore	.0	13.6	.0	.0	13.6
Cottonwood	6.7	.0	.0	.0	6.7
Sycamore/pecan/American elm	13.6	.0	.0	.0	13.6
American elm/green ash	6.7	.0	6.7	.0	13.5
Elm/ash/red maple group	40.7	27.0	47.6	.0	115.3
Sugar maple/beech/yellow birch	6.7	6.7	.0	.0	13.5
Black cherry	.0	.0	6.5	.0	6.5
Northern hardwoods group	6.7	6.7	6.5	.0	20.0
All forest types	285.4	169.0	249.6	.0	704.1

Table 173.--Area of timberland by forest type, forest-type group, and stand-size class, Western Unit, Kentucky, 1988

(In thousands of acres)

Forest type	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Loblolly pine	14.0	.0	.0	.0	14.0	70.7
Eastern redcedar	6.8	.0	.0	.0	6.8	100.0
Loblolly/shortleaf group	20.9	.0	.0	.0	20.9	55.5
Eastern redcedar/hardwood	.0	.0	4.0	.0	4.0	70.8
Loblolly pine/hardwood	13.3	2.0	.0	.0	15.4	62.8
Oak/pine group	13.3	2.0	4.0	.0	19.4	51.9
Post, black, or bear oak	24.8	9.3	14.2	.0	48.3	36.5
Chestnut oak	.0	14.4	.0	.0	14.4	68.4
White oak/red oak/hickory	76.5	21.6	17.4	.0	115.4	21.4
White oak	15.3	.0	7.2	.0	22.5	50.6
Y. poplar/wh. oak/no. red oak	9.1	7.2	.0	.0	16.3	61.4
Sweetgum/yellow-poplar	6.8	.0	10.3	.0	17.1	72.1
Yellow-poplar	.0	.0	.9	.0	.9	100.0
Hawthorn/reverting field	.0	.0	17.4	.0	17.4	58.2
Scarlet oak	25.2	.0	.0	.0	25.2	50.6
Sassafras/persimmon	.0	.0	10.6	.0	10.6	65.5
Red maple/central hardwoods	.0	4.7	.0	.0	4.7	100.0
Mixed central hardwoods	177.2	87.2	61.3	.0	325.6	11.0
Oak/hickory group	334.9	144.2	139.2	.0	618.3	5.7
Black ash/Amer. elm/red maple	4.6	6.4	5.2	.0	16.2	55.0
River birch/sycamore	7.9	13.8	.0	.0	21.7	52.2
Cottonwood	10.3	.0	.0	.0	10.3	71.1
Willow	4.6	3.2	.0	.0	7.8	71.9
Sycamore/pecan/American elm	.0	.0	5.2	.0	5.2	53.5
American elm/green ash	11.5	4.6	11.0	.0	27.2	53.4
Elm/ash/red maple group	38.9	28.0	21.4	.0	88.4	24.9
Sugar maple/beech/yellow birch	10.9	.0	.0	.0	10.9	71.5
Red maple/northern hardwoods	2.6	.0	.0	.0	2.6	100.0
Mixed northern hardwoods	.0	11.0	.0	.0	11.0	72.9
Northern hardwoods group	13.5	11.0	.0	.0	24.5	46.8
All forest types	421.5	185.3	164.6	.0	771.4	4.0
SE	7.8	16.7	19.3	.0	4.0	

Table 174.--Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class, Western Unit, Kentucky, 1988

(In thousands of trees)

Species	Diameter class (inches at breast height)						
	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9
Hard pines	3,165	0	34	683	784	448	229
Other softwoods	5,548	834	465	580	77	87	21
Total softwoods	8,713	834	499	1,263	861	535	250
Red maple	21,829	3,569	2,036	873	474	241	103
Sugar maple	10,576	1,155	1,594	396	528	277	152
Hickory	15,711	3,047	3,758	3,089	1,939	1,179	942
Beech	1,489	0	172	43	74	23	105
Ash	21,139	12,784	1,021	1,224	880	164	235
Black walnut	1,417	0	143	139	47	137	57
Sweetgum	6,939	2,579	2,975	1,523	657	465	170
Yellow-poplar	6,137	0	518	683	595	199	109
Blackgum	11,625	9,057	743	871	228	109	120
Select white oaks	11,099	1,456	2,202	1,534	1,261	959	726
Select red oaks	2,713	2,884	351	372	154	148	139
Other white oaks	834	1,456	832	1,488	1,056	589	554
Other red oaks	2,895	1,491	2,604	1,740	1,215	1,031	869
Basswood	1,489	0	27	0	0	0	0
Other hardwoods	92,867	20,008	10,088	4,564	2,934	1,176	842
Total hardwoods	208,763	59,486	29,063	18,540	12,042	6,698	5,123
All species	217,476	60,321	29,562	19,804	12,904	7,233	5,373
SE	12.1	18.5	8.4	8.3	8.6	8.0	8.6

Table 174.-continued

(In thousands of trees)

Species	Diameter class (inches at breast height)					All classes	SE
	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	48	95	0	0	0	5,486	49.1
Other softwoods	14	11	9	0	0	7,647	35.7
Total softwoods	62	105	9	0	0	13,133	29.4
Red maple	121	18	20	5	0	29,290	36.8
Sugar maple	105	23	9	9	9	14,834	28.8
Hickory	349	415	117	130	0	30,676	18.6
Beech	14	61	39	7	17	2,044	78.7
Ash	86	73	24	23	0	37,654	38.1
Black walnut	14	17	0	0	0	1,971	56.4
Sweetgum	156	83	121	87	0	15,755	36.8
Yellow-poplar	219	86	78	47	20	8,690	42.1
Blackgum	37	50	8	0	4	22,851	30.1
Select white oaks	408	637	186	195	8	20,672	25.3
Select red oaks	159	44	67	80	9	7,120	39.2
Other white oaks	479	137	24	53	0	7,503	27.5
Other red oaks	933	928	421	333	27	14,489	16.7
Basswood	0	0	0	0	0	1,517	98.2
Other hardwoods	558	307	135	329	24	133,834	13.0
Total hardwoods	3,638	2,879	1,251	1,298	119	348,901	9.8
All species	3,700	2,984	1,259	1,298	119	362,033	9.5
SE	9.1	11.6	13.6	13.7	28.5	9.5	

Table 175.--Net dry weight of all live trees on timberland by species and diameter class, Western Unit, Kentucky, 1988

(In thousands of tons)

Species	Diameter class (inches at breast height)										All classes	SE
	1.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0+		
Hard pines	19	2	79	173	133	93	25	80	0	0	604	49.7
Other softwoods	62	43	109	51	33	11	24	11	11	0	355	33.3
Total softwoods	81	46	188	223	166	103	50	91	11	0	959	34.1
Red maple	204	175	201	147	125	88	110	48	30	48	1,176	25.7
Sugar maple	120	203	116	233	205	141	168	78	17	101	1,382	30.9
Hickory	205	422	686	733	745	928	475	771	277	546	5,789	12.0
Beech	10	29	13	31	79	87	15	81	69	179	595	33.0
Ash	551	118	262	325	89	178	79	90	37	59	1,787	20.0
Black walnut	9	14	22	24	67	38	13	33	0	31	251	31.9
Sweetgum	103	294	314	219	241	128	163	118	216	203	2,000	22.4
Yellow-poplar	25	40	101	152	80	68	187	98	114	195	1,060	35.7
Blackgum	383	61	191	100	60	95	40	72	15	33	1,050	22.1
Select white oaks	94	209	282	434	534	606	491	1,021	411	837	4,920	13.4
Select red oaks	108	22	67	63	92	171	198	85	156	371	1,335	22.7
Other white oaks	99	140	318	408	416	468	627	202	63	128	2,869	18.4
Other red oaks	44	275	362	439	641	713	1,053	1,341	794	1,192	6,855	11.6
Basswood	6	5	0	0	0	0	0	0	0	0	11	65.2
Other commercial hardwoods	1,147	935	899	1,106	716	686	640	395	281	905	7,710	12.7
Noncommercial hardwoods	217	185	138	106	105	6	0	0	0	0	757	18.0
Total hardwoods	3,325	3,128	3,973	4,519	4,196	4,401	4,258	4,434	2,482	4,829	39,546	5.3
All species	3,406	3,174	4,161	4,743	4,362	4,504	4,307	4,524	2,493	4,829	40,505	5.0
SE	14.1	7.8	8.0	8.1	7.2	8.4	8.2	11.7	13.3	12.2	5.0	

Table 176.--Net dry weight[a] of all trees on timberland by class of material and species group, Western Unit, Kentucky, 1988

(In thousands of tons)

Class of material	Species group		All groups	SE
	Softwoods	Hardwoods		
Sawtimber trees:				
Sawlog portion	379	14,129	14,509	7.1
Upper stem	53	3,043	3,096	6.9
Total sawtimber trees	433	17,172	17,605	7.0
Poletimber trees	135	7,456	7,591	[illegible]
All growing stock	568	24,628	25,196	5.7
Rough cull trees[b]	74	2,101	2,175	[illegible]
Rotten cull trees[b]	0	161	161	27.8
Salvable dead trees[c]	87	1,530	1,616	15.5
Saplings[c]	81	3,325	3,406	14.1
Tops - growing stock	208	8,549	8,757	5.5
Tops - rough and rotten	28	781	809	11.7
All nongrowing stock	478	16,447	16,925	5.0
All classes	1,046	41,076	42,121	4.9
SE	33.2	5.2	4.9	

[a] Includes bark and sound cull; excludes rotten cull.

[b] Bole portion of trees 5.0 inches d.b.h. and larger.

[c] Includes entire tree aboveground.

Table 177.--Net volume of all trees on timberland by class of timber and species group, Western Unit, Kentucky, 1988

(In millions of cubic feet)

Class of timber	Species group				All groups	SE
	Pines	Other softwoods	Soft hardwoods	Hard hardwoods		
Sawtimber trees:						
Sawlog portion	23.1	3.1	143.9	393.4	563.4	7.4
Upper stem	3.4	.4	31.2	85.6	120.6	7.0
Total sawtimber trees	26.5	3.5	175.1	479.0	684.0	7.3
Poletimber trees	4.4	3.5	125.4	191.0	324.2	7.0
Total growing-stock trees	30.9	7.0	300.4	669.9	1,008.2	5.9
Rough trees:						
Sawtimber size	.6	.9	6.8	22.8	31.1	17.0
Poletimber size	.0	.6	8.1	11.2	19.9	14.8
Total rough trees	.6	1.6	14.8	34.0	50.9	13.0
Rotten trees:						
Sawtimber size	.0	.0	1.6	1.8	3.4	31.1
Poletimber size	.0	.0	.0	.2	.2	89.6
Total rotten trees	.0	.0	1.6	2.0	3.6	29.9
Salvable dead[a] trees:						
Sawtimber size	.8	.0	1.5	15.2	17.5	20.5
Poletimber size	.5	1.4	1.5	10.6	14.0	17.7
Total salvable dead trees	1.3	1.4	3.0	25.7	31.4	16.0
All classes	32.7	9.9	319.9	731.6	1,094.2	5.6
SE	50.0	35.5	14.2	5.9	5.6	

[a] Includes noncommercial species.

Table 178.--Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class, Western Unit, Kentucky, 1988

Species group	Ownership class				All classes
	National Forest	Other public	Forest industry	Other private	
			All live		
			(In millions of cubic feet)		
Softwoods	.0	7.8	1.8	30.4	40.0
Hardwoods	.0	140.8	39.1	842.8	1,022.8
Total all live	0	148.7	40.9	873.2	1,062.7
			Growing stock		
			(In millions of cubic feet)		
Softwoods	.0	7.8	1.8	28.2	37.9
Hardwoods	.0	137.7	36.4	796.3	970.4
Total growing stock	.0	145.5	38.2	824.5	1,008.2
			Sawtimber		
			(In millions of board feet)		
Softwoods	.0	24.4	6.8	83.8	115.0
Hardwoods	.0	453.0	120.2	2,428.6	3,001.8
Total sawtimber	.0	477.4	127.0	2,512.4	3,116.8

Table 179.--Net volume of growing-stock trees on timberland by species and diameter class, Western Unit, Kentucky, 1975

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
Hard pines	5.4	2.7	7.1	5.5	.0	.0	.0	.0	.0	.0	20.7
Other softwoods[a]	.3	1.5	.0	.4	.0	.5	.5	.0	.0	.0	3.2
Total softwoods	5.7	4.2	7.1	5.8	.0	.5	.5	.0	.0	.0	23.8
Red maple	.0	4.0	3.1	1.7	3.5	.0	.0	3.7	2.0	.0	18.0
Sugar maple	1.4	7.6	7.6	6.6	4.0	2.5	1.0	.0	.8	.0	31.6
Hickory	17.5	21.2	25.1	24.8	23.6	18.0	11.4	3.7	2.2	.0	147.5
Beech	.4	.0	2.2	.0	1.3	.7	.8	.6	1.2	2.1	9.3
Ash	8.6	11.8	10.5	4.2	1.2	5.4	3.0	1.6	.0	.0	46.3
Black walnut	1.1	1.0	.8	.5	1.3	.0	.0	.0	.0	.0	4.7
Sweetgum	5.4	2.0	6.8	10.3	9.5	14.8	1.1	4.8	3.8	.0	58.4
Yellow-poplar	6.1	.0	3.5	4.2	10.8	4.3	1.2	4.0	.0	.0	33.9
Blackgum	.5	4.2	4.2	3.3	2.8	1.4	.0	.9	.6	.0	17.9
Select white oaks	8.0	12.7	16.6	15.6	18.8	20.4	14.8	1.9	4.1	.6	113.5
Select red oaks	1.5	4.3	4.3	6.6	4.3	4.3	2.5	1.3	10.4	.8	40.2
Other white oaks	4.7	9.9	11.8	12.6	10.6	6.4	4.6	1.8	.4	1.0	63.7
Other red oaks	10.5	20.6	25.8	31.4	31.9	26.5	23.8	12.3	20.3	5.5	208.7
Other hardwoods[b]	40.7	27.3	26.9	27.6	13.2	18.3	10.2	5.5	13.6	8.5	191.7
Total hardwoods	106.3	126.6	149.1	149.3	137.0	123.1	74.4	42.0	59.3	18.4	985.5
All species	112.0	130.8	156.2	155.2	137.0	123.6	74.9	42.0	59.3	18.4	1,009.4

[a] Includes Eastern redcedar.

[b] Includes Basswood.

Table 180.--Net volume of growing-stock trees on timberland by species and diameter class, Western Unit, Kentucky, 1988

(In millions of cubic feet)

Species	Diameter class (inches at breast height)										All classes	SE
	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	.1	4.2	9.2	7.7	5.1	1.3	3.2	.0	.0	.0	30.9	50.5
Other softwoods	1.2	2.3	.5	1.3	.4	.4	.5	.4	.0	.0	7.0	40.3
Total softwoods	1.3	6.6	9.7	8.9	5.5	1.7	3.7	.4	.0	.0	37.9	42.3
Red maple	4.6	5.9	5.3	3.6	2.3	3.6	.8	.9	.4	.0	27.6	31.0
Sugar maple	3.7	2.6	5.4	4.7	3.9	3.9	1.1	.5	.5	1.6	28.1	37.8
Hickory	11.1	20.0	20.6	20.6	24.8	11.7	20.5	6.7	10.4	.0	146.5	12.6
Beech	.4	.3	.7	.4	2.4	.4	2.4	2.0	.7	2.8	12.4	35.2
Ash	2.8	8.3	10.4	2.7	5.6	2.6	3.2	1.2	2.0	.0	38.8	19.8
Black walnut	.4	.8	.5	1.9	1.3	.4	.8	.0	.0	.0	6.1	41.4
Sweetgum	7.6	10.7	7.4	8.5	4.2	5.8	3.8	6.3	6.4	.0	60.7	22.5
Yellow-poplar	1.8	4.6	7.3	3.9	3.4	8.7	4.5	5.2	3.8	3.7	46.8	36.8
Blackgum	1.1	6.1	2.6	1.9	2.6	1.2	1.9	.4	.0	.4	18.3	19.7
Select white oaks	6.1	8.6	12.9	15.5	15.9	13.3	27.2	8.9	14.1	.9	123.4	14.6
Select red oaks	.5	2.2	1.8	2.5	3.3	5.0	2.5	3.5	6.2	1.4	29.0	23.4
Other white oaks	2.5	7.9	10.3	8.7	11.5	13.1	4.8	1.2	2.8	.0	62.8	20.1
Other red oaks	7.4	10.8	13.4	17.3	20.6	30.2	38.8	20.4	23.5	4.0	186.5	11.7
Basswood	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	100.0
Other hardwoods	22.6	26.9	29.2	18.8	19.6	17.7	12.8	7.0	24.3	4.3	183.2	16.2
Total hardwoods	72.6	115.9	127.8	111.2	121.6	117.6	125.3	64.1	95.1	19.1	970.4	6.3
All species	73.9	122.5	137.5	120.1	127.1	119.3	129.0	64.6	95.1	19.1	1,008.2	5.9
SE	8.6	8.8	9.0	8.2	9.0	9.4	12.0	14.3	14.7	29.1	5.9	

Table 181.--Net volume of sawtimber trees on timberland by species and diameter class, Western Unit, Kentucky, 1975

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+	
All softwoods	18.2	18.4	.0	6.6	7.1	.0	.0	.0	50.2
Total softwoods	18.2	18.4	.0	6.6	7.1	.0	.0	.0	50.2
Red maple	-	1.4	2.8	.0	.0	3.6	1.9	.0	9.7
Sugar maple	-	25.4	17.2	10.6	3.8	.0	3.9	.0	60.8
Hickory	-	122.6	118.5	102.0	66.9	22.5	11.3	.0	443.7
Beech	-	.0	9.2	4.9	4.9	3.6	9.0	17.1	48.7
Ash	-	18.1	6.9	26.6	15.9	7.2	.0	.0	74.7
Black walnut	-	1.7	3.9	.0	.0	.0	.0	.0	5.6
Sweetgum	-	35.3	37.8	64.2	5.9	19.9	18.0	.0	181.0
Yellow-poplar	-	17.3	45.5	18.0	6.6	18.9	.0	.0	106.3
Blackgum	-	12.4	11.1	5.3	.0	3.3	3.6	.0	35.6
Select white oaks	-	65.8	90.3	101.9	78.3	9.6	18.2	2.9	366.9
Select red oaks	-	22.6	15.7	16.0	9.7	4.9	44.4	3.4	116.7
Other white oaks	-	56.9	53.1	32.7	21.4	7.8	2.6	4.1	178.5
Other red oaks	-	137.9	147.7	129.1	127.0	66.7	107.3	32.8	748.5
Other hardwoods	-	114.6	47.4	81.5	54.6	27.5	71.9	46.8	444.2
Total hardwoods	-	632.0	606.9	592.7	394.9	195.5	292.1	106.9	2,821.0
All species	18.2	650.3	606.9	599.4	402.0	195.5	292.1	106.9	2,871.2

Table 182.--Net volume of sawtimber trees on timberland by species and diameter class, Western Unit, Kentucky, 1988

(In millions of board feet)

Species	Diameter class (inches at breast height)								All classes	SE
	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0+		
Hard pines	33.3	29.7	20.6	5.3	14.3	.0	.0	.0	103.3	51.2
Other softwoods	.9	3.9	1.3	1.5	2.1	2.1	.0	.0	11.7	62.0
Total softwoods	34.2	33.5	21.9	6.8	16.4	2.1	.0	.0	115.0	46.3
Red maple	-	12.2	8.8	15.9	3.7	4.5	2.2	.0	47.3	29.6
Sugar maple	-	18.0	17.0	17.0	5.9	2.8	2.2	9.6	72.6	46.6
Hickory	-	80.9	109.7	56.0	107.5	33.3	56.6	.0	443.9	17.5
Beech	-	1.8	9.3	1.4	11.3	9.9	3.8	14.6	52.1	39.2
Ash	-	10.7	24.2	11.7	14.8	6.2	9.2	.0	76.7	22.3
Black walnut	-	7.1	4.9	1.9	4.4	.0	.0	.0	18.3	44.1
Sweetgum	-	30.6	17.2	26.2	18.1	32.3	30.9	.0	155.2	24.6
Yellow-poplar	-	16.2	16.1	41.4	24.1	28.7	20.6	20.8	167.9	42.7
Blackgum	-	7.0	9.7	5.4	8.6	2.0	.0	2.5	35.2	31.9
Select white oaks	-	61.6	70.2	61.9	135.6	44.8	70.2	5.6	449.9	17.2
Select red oaks	-	9.1	13.5	22.1	11.3	16.9	31.5	8.5	112.9	25.9
Other white oaks	-	34.0	48.8	59.6	22.9	4.2	14.5	.0	184.0	21.0
Other red oaks	-	62.0	85.4	131.5	178.7	95.6	118.5	24.0	695.7	13.5
Other hardwoods	-	70.4	84.7	81.0	61.7	35.0	129.8	27.4	490.0	25.6
Total hardwoods	-	421.4	519.6	533.0	608.6	316.1	490.1	113.1	3,001.8	8.2
All species	34.2	455.0	541.5	539.8	625.0	318.2	490.1	113.1	3,116.8	7.7
SE	55.9	8.3	9.0	9.6	12.3	14.8	15.1	29.7	7.7	

Table 183.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Western Unit, Kentucky, 1975

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
All softwoods	7.3	1.0	5.5	.0	13.7	8.8	4.0	37.4	.0	50.2
Total softwoods	7.3	1.0	5.5	.0	13.7	8.8	4.0	37.4	.0	50.2
Red maple	.0	1.3	2.0	2.2	5.5	.0	1.3	4.4	4.1	9.7
Sugar maple	1.3	.5	11.0	5.6	18.3	5.2	4.0	27.5	24.1	60.8
Hickory	9.4	37.8	109.2	46.3	202.6	9.4	75.6	250.6	108.2	443.7
Beech	.2	.0	23.0	16.4	39.5	.3	.0	30.9	17.5	48.7
Ash	18.3	17.2	11.1	3.2	49.7	18.3	22.0	26.9	7.5	74.7
Black walnut	.0	.0	.0	.0	.0	.0	.0	4.7	.9	5.6
Sweetgum	19.8	19.9	43.6	24.6	107.9	19.8	23.9	88.6	48.7	181.0
Yellow-poplar	19.6	5.5	14.7	3.8	43.6	19.6	31.8	39.6	15.4	106.3
Blackgum	.0	4.3	7.1	.7	12.1	.0	4.3	26.8	4.5	35.6
Select white oaks	15.3	50.0	107.0	38.5	210.8	17.5	69.3	211.3	68.8	366.9
Select red oaks	7.7	32.0	31.9	6.7	78.4	8.0	38.9	58.1	11.7	116.7
Other white oaks	3.8	15.4	31.2	18.2	68.6	5.2	19.8	103.5	50.0	178.5
Other red oaks	22.4	91.6	238.5	110.4	462.9	22.4	108.7	410.8	206.6	748.5
Other hardwoods	47.3	65.5	129.0	40.4	282.3	51.6	69.9	238.1	84.6	444.2
Total hardwoods	165.0	340.9	759.2	317.0	1,582.1	177.1	469.4	1,521.9	652.6	2,821.0
Percent of hardwood in each grade	10	22	48	20	100	6	17	54	23	100

Table 184.--Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade, Western Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height					All size classes				
	Grade 1	Grade 2	Grade 3	Grade 4	All grades	Grade 1	Grade 2	Grade 3	Grade 4	All grades
Hard pines	.0	.0	19.6	-	19.6	1.7	5.3	96.3	-	103.3
Other softwoods	3.7	.3	1.7	.0	5.7	7.9	.4	3.5	.0	11.7
Total softwoods	3.7	.3	21.3	.0	25.3	9.6	5.7	99.8	.0	115.0
Red maple	.0	7.9	8.2	10.2	26.3	.0	7.9	14.8	24.6	47.3
Sugar maple	1.2	6.2	19.2	11.0	37.7	2.0	9.4	32.3	28.9	72.6
Hickory	28.9	57.6	77.5	89.4	253.4	29.8	91.4	166.8	155.9	443.9
Beech	.2	.0	23.6	17.2	41.0	.3	2.1	28.3	21.4	52.1
Ash	5.5	14.7	17.2	4.5	41.8	5.5	25.8	32.1	13.4	76.7
Black walnut	2.7	2.2	1.1	.3	6.4	2.7	2.5	10.9	2.2	18.3
Sweetgum	22.5	10.7	32.8	41.5	107.4	22.5	17.2	48.2	67.3	155.2
Yellow-poplar	10.0	35.3	39.5	50.8	135.6	10.0	36.0	52.4	69.6	167.9
Blackgum	1.2	5.6	10.8	.8	18.5	1.2	8.0	23.2	2.8	35.2
Select white oaks	105.0	77.4	89.1	46.6	318.1	106.9	108.7	146.9	87.5	449.9
Select red oaks	36.5	18.2	23.4	12.1	90.3	36.8	20.2	31.0	25.0	112.9
Other white oaks	7.2	27.8	36.9	29.3	101.2	9.6	43.5	68.3	62.6	184.0
Other red oaks	59.2	127.0	197.3	164.8	548.4	59.2	136.7	250.6	249.2	695.7
Other hardwoods	16.2	46.0	141.2	131.4	334.8	17.1	65.8	208.4	198.8	490.0
Total hardwoods	296.3	436.6	717.8	610.1	2,060.8	303.6	575.0	1,114.2	1,009.0	3,001.8
Percent of hardwood in each grade	14	21	35	30	100	10	19	37	34	100

Table 185.--Net volume of sawtimber trees on timberland by species, size class, and tree grade, Western Unit, Kentucky, 1988

(In millions of board feet)

Species	>15" Diameter at breast height						All size classes					
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All grades
Hard pines	.0	.0	16.2	-	3.5	19.6	1.6	10.9	87.3	-	3.5	103.3
Other softwoods	5.7	.0	.0	.0	.0	5.7	7.7	.0	.0	.0	4.1	11.7
Total softwoods	5.7	.0	16.2	.0	3.5	25.3	9.3	10.9	87.3	.0	7.5	115.0
Red maple	.0	7.3	9.2	8.9	.9	26.3	.0	7.3	16.8	22.3	.9	47.3
Sugar maple	.0	8.5	19.2	7.7	2.2	37.7	.0	12.9	32.3	23.7	3.7	72.6
Hickory	65.6	57.4	52.2	61.3	16.8	253.4	65.6	99.8	150.9	105.0	22.6	443.9
Beech	.0	.0	16.6	13.8	10.7	41.0	.0	3.4	20.6	17.5	10.7	52.1
Ash	8.7	15.3	12.3	.0	5.5	41.8	8.7	29.4	26.3	4.5	7.9	76.7
Black walnut	4.4	1.9	.0	.0	.0	6.4	4.4	2.3	10.1	.3	1.2	18.3
Sweetgum	46.4	16.8	20.8	12.6	10.8	107.4	46.4	28.9	38.7	30.0	11.1	155.2
Yellow-poplar	18.8	50.5	22.7	35.8	7.7	135.6	18.8	50.5	38.4	51.5	8.7	167.9
Blackgum	2.0	7.7	1.9	.0	6.8	18.5	2.0	11.3	10.6	.4	11.0	35.2
Select white oaks	144.8	107.5	51.9	8.6	5.3	318.1	144.8	156.3	111.3	27.9	9.6	449.9
Select red oaks	44.0	19.0	10.4	3.5	13.3	90.3	44.0	21.9	17.7	15.2	14.1	112.9
Other white oaks	2.8	45.1	32.9	14.8	5.7	101.2	2.8	71.2	63.4	34.7	11.9	184.0
Other red oaks	92.0	187.7	160.6	68.3	39.8	548.4	92.0	202.7	226.4	126.3	48.3	695.7
Other hardwoods	25.7	46.2	92.2	117.9	52.9	334.8	25.7	73.9	137.5	176.9	76.1	490.0
Total hardwoods	455.1	571.0	502.9	353.5	178.3	2,060.8	455.1	771.7	901.0	636.3	237.8	3,001.8
All species	460.8	571.0	519.1	353.5	181.8	2,086.1	464.4	782.6	988.3	636.3	245.3	3,116.8

Table 186.--Average annual net change of growing-stock volume on timberland by species and component of change, Western Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Component of change							Net change
	Ingrowth	Accretion	Gross growth	Mortality	Cull increment	Net growth	Removals	
Eastern redcedar	29	162	191	-73	0	118	0	118
Hard pines	240	832	1,073	-65	-35	973	-200	772
Other softwoods	0	173	173	0	0	173	0	173
Total softwoods	269	1,168	1,437	-137	-35	1,264	-200	1,064
Red maple	235	495	730	0	0	730	0	730
Sugar maple	99	610	709	-126	-102	482	-752	-270
Hickory	160	2,271	2,431	-847	-96	1,489	-1,566	-77
Beech	33	201	234	0	0	234	0	234
Ash	433	852	1,285	-189	0	1,096	-1,663	-567
Black walnut	46	181	227	0	0	227	-123	105
Sweetgum	540	852	1,391	-97	0	1,295	-1,126	169
Yellow-poplar	293	955	1,248	0	0	1,248	-269	979
Blackgum	72	346	418	0	-57	360	-334	26
Select white oaks	281	3,749	4,030	-604	-150	3,275	-2,520	755
Select red oaks	0	804	804	-496	0	308	-1,155	-847
Other white oaks	172	940	1,112	-427	0	685	-755	-69
Other red oaks	820	3,087	3,907	-890	0	3,017	-4,697	-1,680
Other hardwoods	1,047	3,267	4,314	-2,081	-403	1,829	-2,467	-637
Total hardwoods	4,231	18,612	22,843	-5,758	-809	16,276	-17,425	-1,149
All species	4,500	19,779	24,280	-5,895	-844	17,540	-17,625	-85

Table 187.--Average annual net growth and average annual removals of growing-stock volume on timberland by species, Western Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Species	Net growth	Removals
Eastern redcedar	118	0
Hard pines	973	-200
Other softwoods	173	0
Total softwoods	1,264	-200
Red maple	730	0
Sugar maple	482	-752
Hickory	1,489	-1,566
Beech	234	0
Ash	1,096	-1,663
Black walnut	227	-123
Sweetgum	1,295	-1,126
Yellow-poplar	1,248	-269
Blackgum	360	-334
Select white oaks	3,275	-2,520
Select red oaks	308	-1,155
Other white oaks	685	-755
Other red oaks	3,017	-4,697
Other hardwoods	1,829	-2,467
Total hardwoods	16,276	-17,425
All species	17,540	-17,625

Table 188.--Average annual net growth and average annual removals of sawtimber volume on timberland by species, Western Unit, Kentucky, 1974-87

(In thousands of board feet)

Species	Net growth	Removals
Eastern redcedar	222	0
Hard pines	4,565	-596
Other softwoods	730	0
Total softwoods	5,518	-596
Red maple	2,853	0
Sugar maple	3,104	-2,209
Hickory	6,738	-6,721
Beech	262	0
Ash	2,784	-2,632
Black walnut	966	0
Sweetgum	2,028	-3,985
Yellow-poplar	5,496	-817
Blackgum	705	-738
Select white oaks	16,518	-10,211
Select red oaks	4,003	-4,290
Other white oaks	3,396	-2,982
Other red oaks	12,647	-16,656
Other hardwoods	8,830	-5,349
Total hardwoods	70,331	-56,591
All species	75,850	-57,186

Table 189.--Average annual mortality of growing-stock and sawtimber volume on timberland by species, Western Unit, Kentucky, 1974-87

(In thousands of feet)

Species	Growing-stock	Sawtimber
	Cubic feet	Board feet
Eastern redcedar	-73	0
Hard pines	-65	-171
Total softwoods	-137	-171
Sugar maple	-126	0
Hickory	-847	-798
Ash	-189	0
Sweetgum	-97	-475
Select white oaks	-604	-1,497
Select red oaks	-496	-951
Other white oaks	-427	-718
Other red oaks	-890	-1,988
Other hardwoods	-2,081	-3,874
Total hardwoods	-5,758	-10,302
All species	-5,895	-10,473

Table 190.--Average annual net growth and average annual removals of growing-stock volume on timberland by ownership class and species group, Western Unit, Kentucky, 1974-87

(In thousands of cubic feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	805	1,335	2,140	0	-4,481	-4,481
Forest industry	173	2,270	2,443	0	-982	-982
Other private	286	12,671	12,957	-200	-11,962	-12,163
All classes	1,264	16,276	17,540	-200	-17,425	-17,625

Table 191.--Average annual net growth and average annual removals of sawtimber volume on timberland by ownership class and species group, Western Unit, Kentucky, 1974-87

(In thousands of board feet)

Ownership class	Net growth			Removals		
	Softwoods	Hardwoods	All groups	Softwoods	Hardwoods	All groups
Other public	3,147	14,226	17,373	0	-16,178	-16,178
Forest industry	730	9,917	10,647	0	-2,560	-2,560
Other private	1,641	46,188	47,829	-596	-37,852	-38,448
All classes	5,518	70,331	75,850	-596	-56,591	-57,186

COUNTY TABLES

Table 192.--Land area by county, geographic unit, and land class, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Land class					All classes[a]
	Timberland	Woodland	Productive reserved	Total forest land	Nonforest land	
Floyd	205.6	.0	.0	205.6	45.8	251.5
Harlan	271.8	.0	3.9	275.8	23.9	299.6
Knott	196.7	.0	2.8	199.6	25.7	225.3
Leslie	232.5	.1	3.4	236.0	21.0	257.0
Letcher	183.3	.4	7.0	190.7	26.3	217.0
Martin	111.2	.0	.0	111.2	36.3	147.5
Perry	179.7	.0	6.0	185.7	32.2	218.0
Pike	423.2	.0	.0	423.2	79.0	502.2
Eastern Unit	1,804.0	.6	23.2	1,827.8	290.3	2,118.1
Carter	184.0	b	2.0	186.0	74.4	260.4
Elliot	124.4	.0	b	124.4	25.5	149.9
Johnson	114.6	.1	.0	114.8	54.2	168.9
Lawrence	190.8	.0	.0	190.8	78.0	268.8
Lewis	229.2	.0	b	229.2	80.4	309.6
Magoffin	157.0	.0	.0	157.0	41.1	198.1
Morgan	189.9	.0	.0	189.9	54.6	244.5
Rowan	133.9	b	.0	133.9	46.6	180.6
Wolfe	107.0	.0	13.1	120.1	22.5	142.7
Boyd and Greenup	229.9	.7	4.3	234.8	89.9	324.7
Menifee and Powell	189.9	.7	15.6	206.3	39.1	245.4
Northern Cumberland Unit	1,850.7	1.6	35.0	1,887.2	606.4	2,493.6
Bell	203.3	.1	11.5	214.8	16.1	230.9
Breathitt	283.0	.0	.0	283.0	33.9	316.9
Clay	254.1	.0	.0	254.1	47.2	301.4
Estill	122.7	b	.0	122.7	40.9	163.6

Table 192.-continued

(In thousands of acres)

County and geographic unit	Land class					All classes[a]
	Timberland	Woodland	Productive reserved	Total forest land	Nonforest land	
Jackson	176.3	.0	b	176.3	45.2	221.6
Knox	180.9	.0	.0	180.9	67.2	248.1
Laurel	168.5	.1	1.9	170.4	107.4	277.9
McCreary	202.9	5.0	49.3	257.3	15.7	273.0
Rockcastle	139.8	.0	.9	140.7	62.6	203.3
Whitley	207.3	.0	1.1	208.4	75.4	283.7
Lee and Owsley	217.9	.0	b	217.9	44.2	262.1
Southern Cumberland Unit	2,156.8	5.2	64.6	2,226.6	555.9	2,782.5
Owen	109.5	b	.0	109.5	116.8	226.3
Anderson and Washington	123.3	.0	.2	123.5	199.7	323.2
Bath and Montgomery	108.1	.0	b	108.2	196.6	304.7
Boone, Campbell, Kenton	123.5	.0	.8	124.3	234.4	358.7
Bourbon, Harrison, Nicholas	74.9	.0	b	75.0	435.7	510.7
Boyle and Lincoln	96.3	.0	.0	96.4	235.6	332.0
Bracken and Robertson	80.8	.0	.1	80.9	113.2	194.1
Carroll and Gallatin	83.7	.0	.6	84.4	62.1	146.5
Clark, Fayette, Madison	118.5	.0	2.0	120.5	508.4	628.9
Fleming and Mason	127.6	.0	b	127.6	251.1	378.7
Franklin, Scott, Woodford	114.5	.0	b	114.6	326.8	441.3
Garrard, Jessamine, Mercer	87.1	.0	.8	88.0	332.2	420.1
Grant and Pendleton	147.7	.0	.9	148.7	196.9	345.5
Henry, Shelby, Spencer	136.4	.0	.6	137.1	418.1	555.1
Jefferson, Oldham, Trimble	137.3	.0	3.4	140.7	322.9	463.6
Bluegrass Unit	1,669.4	b	9.6	1,679.0	3,950.5	5,629.5

Table 192.-continued

(In thousands of acres)

County and geographic unit	Land class					All classes[a]
	Timberland	Woodland	Productive reserved	Total forest land	Nonforest land	
Adair	139.2	.0	b	139.2	121.5	260.7
Bullitt	118.7	.0	.0	118.7	73.6	192.3
Casey	148.0	.0	.0	148.0	137.0	285.0
Cumberland	131.9	.0	3.7	135.5	59.3	194.8
Grayson	147.8	.0	3.8	151.5	164.1	315.6
Hardin	161.6	.0	.1	161.7	241.0	402.7
Hart	114.8	.0	5.2	120.1	143.9	264.0
Marion	84.5	b	.0	84.5	137.5	222.0
Meade	79.2	.0	1.8	81.1	115.1	196.1
Metcalfe	87.7	b	.0	87.7	98.6	186.3
Nelson	96.5	.0	.1	96.6	174.4	271.1
Pulaski	197.9	b	19.8	217.7	204.8	422.5
Wayne	195.1	.0	35.4	230.5	55.0	285.5
Clinton and Russell	133.2	b	43.6	176.8	108.6	285.4
Green, Larue, Taylor	189.0	.4	.5	189.8	336.6	526.4
Breckenridge and Hancock	222.6	.2	4.9	227.6	254.8	482.4
Pennyroyal Unit	2,247.6	.7	118.7	2,367.0	2,425.8	4,792.8
Allen	87.6	.0	.1	87.7	128.5	216.2
Butler	154.4	.0	b	154.4	121.6	276.0
Caldwell	93.9	.0	.0	93.9	128.4	222.3
Christian	150.9	1.0	.6	152.4	309.8	462.2
Crittenden	105.1	.0	.0	105.1	125.1	230.2
Hopkins	138.3	5.0	.4	143.7	209.7	353.4
Monroe	83.1	.1	.1	83.2	128.9	212.1
Muhlenberg	126.6	7.7	.3	134.6	171.3	305.9
Ohio	199.6	.0	b	199.6	181.8	381.4

Table 192.-continued

(In thousands of acres)

County and geographic unit	Land class					All classes[a]
	Timberland	Woodland	Productive reserved	Total forest land	Nonforest land	
Warren	85.3	.0	.2	85.5	264.9	350.4
Logan, Simpson, Todd	192.0	b	.1	192.2	556.2	748.4
Daviess, Henderson, McLean	151.0	5.4	1.1	157.5	582.8	740.4
Union and Webster	99.6	.2	b	99.8	333.7	433.5
Barren and Edmonson	180.0	.0	44.4	224.5	277.2	501.6
Western Coalfield Unit	1,847.5	19.3	47.4	1,914.2	3,519.8	5,434.0
Calloway	83.8	.0	.0	83.8	163.3	247.0
Graves	76.4	.0	b	76.4	279.8	356.2
Livingston	96.8	.0	.0	96.8	102.6	199.4
Lyon	85.7	.0	5.0	90.7	43.2	133.9
Marshall	86.0	.0	2.4	88.4	106.1	194.5
Trigg	159.4	3.7	8.1	171.2	98.5	269.7
Ballard and McCracken	98.6	.0	1.2	99.8	223.2	323.0
Carlisle, Fulton, Hickman	84.8	5.5	.3	90.6	323.7	414.2
Western Unit	771.4	9.2	17.0	797.6	1,340.3	2,137.9
State total	12,347.4	36.5	315.5	12,699.4	12,688.9	25,388.3

[a] Source: 1981 United States Department of Commerce, Bureau of Census.

[b] Less than 50 acres.

Table 193.--Area of timberland by county, geographic unit, and ownership class, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Ownership class								All ownerships
	National Forest	Miscellaneous federal	State	County and municipal	Forest industry	Farmer	Corporate	Individual	
Floyd	.0	10.4	.0	.0	.0	.0	31.6	163.6	205.6
Harlan	.0	.0	5.0	.0	20.2	.0	127.7	118.9	271.8
Knott	.0	.0	3.8	.0	.0	.0	68.4	124.6	196.7
Leslie	46.8	.0	.0	.0	11.9	.0	55.5	118.3	232.5
Letcher	.8	.8	.0	.0	.0	.0	54.2	127.5	183.3
Martin	.0	.0	.0	.0	.0	.0	34.3	76.9	111.2
Perry	2.9	.0	.6	.0	.0	.0	45.2	131.0	179.7
Pike	.1	12.7	.0	.0	.0	.0	126.1	284.3	423.2
Eastern Unit	50.6	23.9	9.4	.0	32.1	.0	542.9	1,145.1	1,804.0
Carter	.0	11.2	.0	.0	11.6	.0	11.6	149.6	184.0
Elliot	.0	1.0	.0	.0	5.9	.0	.0	117.5	124.4
Johnson	.0	11.8	.0	.0	.0	.0	26.8	76.1	114.6
Lawrence	.0	14.2	.0	.0	.0	4.7	15.8	156.1	190.8
Lewis	.0	.0	.0	.0	51.3	.0	17.6	160.3	229.2
Magoffin	.0	.0	.0	.0	.0	.0	19.6	137.4	157.0
Morgan	10.2	.0	.0	.0	.0	.0	.0	179.7	189.9
Rowan	53.7	.0	.0	.0	.0	.0	9.7	70.5	133.9
Wolfe	2.3	.0	.0	.0	.0	.0	14.6	90.1	107.0
Boyd and Greenup	.0	.0	.0	.0	.0	24.6	19.7	185.6	229.9
Menifee and Powell	43.9	.0	.0	.0	.0	.0	7.5	138.5	189.9
Northern Cumberland Unit	110.1	38.2	.0	.0	68.9	29.4	142.9	1,461.3	1,850.7
Bell	.1	.0	12.0	.0	.0	.0	69.1	122.1	203.3
Breathitt	.0	.0	11.2	.0	.0	65.6	36.2	170.0	283.0
Clay	73.0	.0	1.3	.0	.0	.0	36.0	143.8	254.1
Estill	3.2	.0	.0	.0	.0	.0	.0	119.5	122.7

Table 193.-continued

(In thousands of acres)

County and geographic unit	Ownership class								All ownerships
	National Forest	Miscellaneous federal	State	County and municipal	Forest industry	Farmer	Corporate	Individual	
Jackson	56.1	.0	.0	.0	.0	.0	.0	120.3	176.3
Knox	.0	.1	.0	.0	.0	22.1	11.0	147.8	180.9
Laurel	56.9	.0	.0	.0	.0	11.9	.0	99.8	168.5
McCreary	128.8	.0	.0	.0	.0	.0	6.5	67.7	202.9
Rockcastle	10.0	.0	.0	.0	.0	.0	6.7	123.2	139.8
Whitley	39.0	.0	.0	.0	.0	2.6	6.1	159.6	207.3
Lee and Owsley	19.6	.0	.0	.0	.0	.0	51.8	146.6	217.9
Southern Cumberland Unit	386.8	.1	24.5	.0	.0	102.1	223.3	1,420.0	2,156.8
Owen	.0	.0	1.8	.0	.0	27.7	.0	80.0	109.5
Anderson and Washington	.0	.0	.0	.0	.0	53.5	.0	69.8	123.3
Bath and Montgomery	16.9	.0	.0	.0	7.4	52.6	9.2	22.0	108.1
Boone, Campbell, Kenton	.0	.0	.3	.0	.0	14.2	15.4	93.6	123.5
Bourbon, Harrison, Nicholas	.0	.0	.0	.0	.0	5.9	7.8	61.1	74.9
Boyle and Lincoln	.0	.0	.0	.0	.0	.0	9.6	86.7	96.3
Bracken and Robertson	.0	.0	.0	.0	.0	13.7	.0	67.1	80.8
Carroll and Gallatin	.0	.0	.0	.0	.0	45.7	11.4	26.6	83.7
Clark, Fayette, Madison	.0	.0	.6	.0	.0	18.4	18.4	81.2	118.5
Fleming and Mason	.0	.0	.0	.0	.0	68.7	8.2	50.6	127.6
Franklin, Scott, Woodford	.0	.0	.0	.0	.0	26.1	.0	88.5	114.5
Garrard, Jessamine, Mercer	.0	.0	.0	.0	.0	19.6	7.1	60.4	87.1
Grant and Pendleton	.0	.0	.2	.0	.0	55.3	.0	92.2	147.7
Henry, Shelby, Spencer	.0	11.7	.0	.1	.0	73.3	.0	51.3	136.4
Jefferson, Oldham, Trimble	.0	.0	.3	.0	.0	46.2	20.1	70.6	137.3
Bluegrass Unit	16.9	11.7	3.2	.1	7.4	521.0	107.3	1,001.7	1,669.4

Table 193.-continued

(In thousands of acres)

County and geographic unit	Ownership class								All ownerships
	National Forest	Miscellaneous federal	State	County and municipal	Forest industry	Farmer	Corporate	Individual	
Adair	.0	9.9	.0	.0	.0	69.6	.0	59.6	139.2
Bullitt	.0	20.7	.0	.1	.0	.0	33.6	64.3	118.7
Casey	.0	.0	.0	.0	24.0	6.0	6.0	111.9	148.0
Cumberland	.0	.0	.0	.0	.0	43.1	17.2	71.5	131.9
Grayson	.0	.0	.0	.0	.0	41.6	8.7	97.4	147.8
Hardin	.0	19.0	.0	.0	.0	25.3	.0	117.3	161.6
Hart	.0	.0	.0	.0	.0	42.2	.0	72.6	114.8
Marion	.0	.0	.0	.0	.0	7.0	.0	77.4	84.5
Meade	.0	7.9	.0	.0	.0	44.0	.0	27.4	79.2
Metcalfe	.0	.0	.0	.0	.0	5.8	.0	81.9	87.7
Nelson	.0	.0	.0	.0	.0	25.1	20.0	51.4	96.5
Pulaski	27.7	.0	.0	.0	.0	55.1	8.4	106.6	197.9
Wayne	1.8	.0	.0	.0	12.8	66.1	19.2	95.1	195.1
Clinton and Russell	.0	.0	.0	.0	.0	79.1	12.0	42.1	133.2
Green, Larue, Taylor	.0	9.1	.0	.0	.0	50.4	12.3	117.2	189.0
Breckenridge and Hancock	.0	.0	2.2	.0	.0	45.5	9.9	165.0	222.6
Pennyroyal Unit	29.4	66.6	2.2	.1	36.9	606.0	147.4	1,359.0	2,247.6
Allen	.0	.0	.0	.0	.0	.0	.0	87.6	87.6
Butler	.0	.0	.0	.1	.0	13.8	.0	140.6	154.4
Caldwell	.0	.0	2.6	.0	.0	.0	10.8	80.4	93.9
Christian	.0	2.9	13.1	.0	.0	15.9	18.6	100.4	150.9
Crittenden	.0	.0	.0	.0	6.6	.0	.0	98.5	105.1
Hopkins	.0	.0	.8	.0	.0	.0	51.3	86.2	138.3
Monroe	.0	.0	.0	.0	.0	17.4	.0	65.7	83.1
Muhlenberg	.0	.3	.0	.0	.0	.0	53.4	73.0	126.6
Ohio	.0	.0	.0	.0	.0	8.5	36.9	154.1	199.6

Table 193.-continued

(In thousands of acres)

County and geographic unit	Ownership class								All ownerships
	National Forest	Miscellaneous federal	State	County and municipal	Forest industry	Farmer	Corporate	Individual	
Warren	.0	.0	.0	.0	7.0	10.4	.0	67.9	85.3
Logan, Simpson, Todd	.0	.0	.0	.0	.0	29.6	6.0	156.4	192.0
Daviess, Henderson, McLean	.0	.0	4.3	.0	.0	15.6	18.8	112.3	151.0
Union and Webster	.0	.0	7.6	.0	.0	.0	.0	92.0	99.6
Barren and Edmonson	.0	.0	.0	.0	.0	9.6	.0	170.4	180.0
Western Coalfield Unit	.0	3.2	28.4	.1	13.7	120.7	195.9	1,485.5	1,847.5
Calloway	.0	5.3	.1	.1	.0	.0	13.7	64.5	83.8
Graves	.0	.0	1.1	.0	5.1	29.7	.0	40.5	76.4
Livingston	.0	1.0	.0	.0	7.4	7.4	4.1	77.0	96.8
Lyon	.0	37.9	.1	.2	.9	.0	13.6	33.0	85.7
Marshall	.0	2.5	.0	.0	.0	10.9	.0	72.6	86.0
Trigg	.0	60.1	.0	.1	9.1	.0	12.8	77.3	159.4
Ballard and McCracken	.0	1.2	6.6	.0	12.9	12.9	.0	65.0	98.6
Carlisle, Fulton, Hickman	.0	1.2	.2	.0	10.3	11.2	4.6	57.2	84.8
Western Unit	.0	109.3	8.1	.4	45.6	72.1	48.8	487.1	771.4
State total	593.8	253.0	75.8	.7	204.5	1,451.3	1,408.5	8,359.8	12,347.4

Table 194.--Area of timberland by county, geographic unit, and forest-type group, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Floyd	.0	.0	7.2	.0	192.2	.0	.0	6.3	.0	205.6	4.6
Harlan	.0	.0	18.6	11.9	207.7	.0	.0	33.6	.0	271.8	3.7
Knott	.0	.0	7.6	.0	182.1	.0	.0	7.0	.0	196.7	3.8
Leslie	1.3	.0	.0	.0	203.4	.0	.0	27.8	.0	232.5	2.5
Letcher	.4	.0	.0	6.9	175.9	.0	.0	.0	.0	183.3	2.3
Martin	.0	.0	.0	6.9	104.3	.0	.0	.0	.0	111.2	7.9
Perry	.0	.0	5.6	6.7	167.3	.0	.0	.0	.0	179.7	5.5
Pike	.0	.0	.0	7.3	382.9	.0	.0	33.0	.0	423.2	4.1
Eastern Unit	1.8	.0	39.0	39.7	1,615.9	.0	.0	107.7	.0	1,804.0	1.5
Carter	.0	.0	5.8	20.3	152.1	.0	.0	5.8	.0	184.0	5.2
Elliot	.0	.0	.0	8.5	115.9	.0	.0	.0	.0	124.4	6.8
Johnson	.0	.0	7.3	13.0	94.3	.0	.0	.0	.0	114.6	13.0
Lawrence	.0	.0	8.6	16.7	153.6	.0	11.9	.0	.0	190.8	7.2
Lewis	.0	.0	.0	.0	221.3	.0	7.9	.0	.0	229.2	3.2
Magoffin	.0	.0	6.5	5.1	132.3	.0	.0	13.1	.0	157.0	4.6
Morgan	.0	.0	16.9	8.3	164.6	.0	.0	.0	.0	189.9	6.4
Rowan	3.4	.0	.0	3.4	127.1	.0	.0	.0	.0	133.9	2.6
Wolfe	.0	.0	7.7	6.9	92.4	.0	.0	.0	.0	107.0	6.9
Boyd and Greenup	6.5	.0	5.7	13.1	198.0	.0	6.6	.0	.0	229.9	7.6
Menifee and Powell	6.5	.0	12.3	4.9	162.3	.0	.0	4.0	.0	189.9	5.0
Northern Cumberland Unit	16.4	.0	70.9	100.2	1,613.9	.0	26.4	22.8	.0	1,850.7	1.9
Bell	9.8	.0	14.0	.0	151.6	.0	3.2	24.8	.0	203.3	2.3
Breathitt	.0	.0	23.6	3.1	243.7	.0	.0	12.6	.0	283.0	4.1
Clay	.0	.0	18.1	.0	211.4	.0	.0	24.6	.0	254.1	2.2
Estill	.0	.0	8.2	19.0	95.5	.0	.0	.0	.0	122.7	2.8

Table 194.-continued

(In thousands of acres)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Jackson	.0	.0	9.1	23.7	143.6	.0	.0	.0	.0	176.3	7.3
Knox	.0	.0	5.5	5.5	169.9	.0	.0	.0	.0	180.9	6.7
Laurel	.0	.0	32.7	11.8	112.2	.0	5.9	5.9	.0	168.5	3.4
McCreary	8.6	.0	23.8	57.1	100.4	.0	6.5	6.5	.0	202.9	1.2
Rockcastle	.0	.0	13.3	6.7	113.2	.0	.0	6.7	.0	139.8	2.8
Whitley	.0	.0	53.0	14.7	118.7	6.1	6.1	8.6	.0	207.3	5.0
Lee and Owsley	.0	.0	13.2	18.1	168.9	.0	17.6	.0	.0	217.9	3.4
Southern Cumberland Unit	18.4	.0	214.5	159.6	1,629.2	6.1	39.4	89.7	.0	2,156.8	1.2
Owen	.0	.0	5.8	29.9	65.7	.0	8.0	.0	.0	109.5	4.0
Anderson and Washington	.0	.0	7.5	.0	57.2	.0	35.1	23.6	.0	123.3	13.7
Bath and Montgomery	.0	.0	7.4	22.3	78.4	.0	.0	.0	.0	108.1	4.6
Boone, Campbell, Kenton	.0	.0	.0	.0	50.2	.0	21.9	51.5	.0	123.5	4.3
Bourbon, Harrison, Nicholas	.0	.0	.0	19.7	41.4	.0	13.8	.0	.0	74.9	17.8
Boyle and Lincoln	.0	.0	.0	.0	86.7	.0	.0	9.6	.0	96.3	5.1
Bracken and Robertson	.0	.0	6.8	24.6	42.5	.0	6.8	.0	.0	80.8	9.7
Carroll and Gallatin	.0	.0	.0	5.7	60.9	.0	11.4	5.7	.0	83.7	13.5
Clark, Fayette, Madison	.0	.0	12.8	32.8	58.4	.0	7.3	7.2	.0	118.5	4.9
Fleming and Mason	.0	.0	17.7	17.7	82.8	.0	.0	9.4	.0	127.6	7.8
Franklin, Scott, Woodford	.0	.0	4.5	9.1	96.4	.0	.0	4.5	.0	114.5	6.1
Garrard, Jessamine, Mercer	.0	.0	.0	7.1	58.9	.0	21.2	.0	.0	87.1	5.7
Grant and Pendleton	.0	.0	.0	8.7	89.0	.0	41.3	8.7	.0	147.7	3.7
Henry, Shelby, Spencer	.0	.0	11.3	17.8	81.4	.0	6.5	19.4	.0	136.4	12.6
Jefferson, Oldham, Trimble	.0	.0	.0	24.7	86.4	.0	20.8	5.4	.0	137.3	12.0
Bluegrass Unit	.0	.0	73.9	220.2	1,036.2	.0	194.0	145.1	.0	1,669.4	2.4

Table 194.-continued

(In thousands of acres)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Adair	.0	.0	.0	8.5	114.6	.0	.0	16.0	.0	139.2	3.5
Bullitt	.0	.0	25.8	25.8	59.3	.0	.0	7.8	.0	118.7	3.4
Casey	.0	.0	6.0	12.0	123.9	.0	6.0	.0	.0	148.0	7.3
Cumberland	.0	.0	7.4	11.9	100.7	.0	.0	11.9	.0	131.9	8.5
Grayson	.0	.0	20.6	3.2	115.9	.0	.0	8.1	.0	147.8	8.5
Hardin	.0	.0	7.6	12.5	111.4	.0	11.5	18.7	.0	161.6	8.0
Hart	.0	.0	22.8	21.3	55.6	.0	7.6	7.6	.0	114.8	9.2
Marion	.0	.0	.0	.0	77.4	.0	.0	7.0	.0	84.5	5.0
Meade	.0	.0	.0	2.9	76.3	.0	.0	.0	.0	79.2	5.6
Metcalfe	.0	.0	.0	8.0	73.9	.0	.0	5.8	.0	87.7	4.6
Nelson	.0	.0	13.8	12.5	57.1	.0	13.2	.0	.0	96.5	4.9
Pulaski	.0	.0	21.6	51.5	112.8	.0	.0	12.0	.0	197.9	3.4
Wayne	.0	.0	15.0	19.2	148.0	.0	.0	12.8	.0	195.1	6.1
Clinton and Russell	.0	.0	11.9	16.8	104.5	.0	.0	.0	.0	133.2	10.0
Green, Larue, Taylor	.0	.0	11.4	.0	120.5	.0	17.2	39.9	.0	189.0	4.4
Breckenridge and Hancock	.0	.0	4.3	8.9	188.7	.0	9.9	10.8	.0	222.6	5.9
Pennyroyal Unit	.0	.0	168.0	215.0	1,640.7	.0	65.3	158.5	.0	2,247.6	1.7
Allen	.0	.0	.0	26.3	53.6	.0	.6	7.1	.0	87.6	15.9
Butler	.0	.0	.0	11.3	136.3	.0	.0	6.9	.0	154.4	11.5
Caldwell	.0	.0	8.7	12.2	53.4	8.7	5.4	5.4	.0	93.9	4.8
Christian	.0	.0	4.7	7.6	126.5	4.7	7.4	.0	.0	150.9	7.6
Crittenden	.0	.0	.0	.0	62.5	.0	29.4	13.3	.0	105.1	4.4
Hopkins	.0	.0	6.8	6.8	102.5	6.7	15.6	.0	.0	138.3	8.7
Monroe	.0	.0	.0	.0	77.3	.0	.0	5.8	.0	83.1	16.9
Muhlenberg	.0	.0	16.8	5.7	57.1	10.9	7.6	28.6	.0	126.6	15.0
Ohio	.0	.0	.0	.0	171.6	5.5	9.1	13.4	.0	199.6	8.8

Table 194.-continued

(In thousands of acres)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Warren	.0	.0	.0	10.4	69.3	.0	5.6	.0	.0	85.3	10.9
Logan, Simpson, Todd	.0	.0	9.6	23.6	149.1	.0	3.6	6.1	.0	192.0	7.9
Daviess, Henderson, McLean	.0	.0	11.8	.0	69.1	7.7	50.6	11.8	.0	151.0	10.6
Union and Webster	.0	.0	.0	.0	73.1	8.5	18.0	.0	.0	99.6	10.3
Barren and Edmonson	.0	.0	.0	.0	160.4	.0	4.9	14.7	.0	180.0	5.5
Western Coalfield Unit	.0	.0	58.5	103.8	1,361.7	52.7	157.7	113.1	.0	1,847.5	2.7
Calloway	.0	.0	13.7	.0	63.7	.0	6.3	.0	.0	83.8	6.8
Graves	.0	.0	.0	2.0	69.3	.0	5.1	.0	.0	76.4	6.9
Livingston	.0	.0	.0	.0	85.3	.0	7.4	4.1	.0	96.8	10.4
Lyon	.0	.0	.0	2.1	82.7	.0	.9	.0	.0	85.7	10.2
Marshall	.0	.0	.0	6.9	50.3	.0	15.7	13.1	.0	86.0	14.5
Trigg	.0	.0	7.2	1.9	150.3	.0	.0	.0	.0	159.4	6.9
Ballard and McCracken	.0	.0	.0	6.5	71.3	.0	18.2	2.6	.0	98.6	18.3
Carlisle, Fulton, Hickman	.0	.0	.0	.0	45.3	.0	34.8	4.6	.0	84.8	13.0
Western Unit	.0	.0	20.9	19.4	618.3	.0	88.4	24.5	.0	771.4	4.0
State total	36.6	.0	645.5	857.9	9,515.8	58.8	571.3	661.4	.0	12,347.4	.8
SE	38.5	.0	10.4	8.7	1.4	34.1	10.8	10.2	.0	.8	

Table 195.--Area of timberland by county, geographic unit, and stand-size class, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Floyd	152.6	31.6	21.5	.0	205.6	4.6
Harlan	180.0	58.9	32.9	.0	271.8	3.7
Knott	144.8	29.8	22.2	.0	196.7	3.8
Leslie	167.7	31.7	33.0	.0	232.5	2.5
Letcher	131.4	48.9	3.0	.0	183.3	2.3
Martin	63.2	27.4	20.6	.0	111.2	7.9
Perry	109.3	44.9	25.5	.0	179.7	5.5
Pike	297.2	65.0	61.0	.0	423.2	4.1
Eastern Unit	1,246.1	338.2	219.7	.0	1,804.0	1.5
Carter	78.5	81.4	24.1	.0	184.0	5.2
Elliot	67.1	37.4	20.0	.0	124.4	6.8
Johnson	50.8	34.1	29.7	.0	114.6	13.0
Lawrence	102.1	57.7	31.0	.0	190.8	7.2
Lewis	144.6	49.8	34.7	.0	229.2	3.2
Magoffin	82.1	53.1	21.8	.0	157.0	4.6
Morgan	107.9	74.3	7.7	.0	189.9	6.4
Rowan	102.0	26.3	5.5	.0	133.9	2.6
Wolfe	61.1	32.7	13.3	.0	107.0	6.9
Boyd and Greenup	165.2	32.1	32.7	.0	229.9	7.6
Menifee and Powell	119.3	59.2	11.4	.0	189.9	5.0
Northern Cumberland Unit	1,080.6	538.2	231.9	.0	1,850.7	1.9
Bell	153.9	24.6	24.8	.0	203.3	2.3
Breathitt	155.3	66.7	61.0	.0	283.0	4.1
Clay	143.3	63.5	47.3	.0	254.1	2.2
Estill	62.3	33.5	26.9	.0	122.7	2.8
Jackson	121.5	26.3	28.5	.0	176.3	7.3
Knox	106.2	63.8	11.0	.0	180.9	6.7
Laurel	115.4	47.2	5.9	.0	168.5	3.4
McCreary	121.2	46.3	35.4	.0	202.9	1.2
Rockcastle	106.5	26.6	6.7	.0	139.8	2.8
Whitley	150.6	24.4	32.3	.0	207.3	5.0
Lee and Owsley	129.2	48.5	40.1	.0	217.9	3.4
Southern Cumberland Unit	1,365.5	471.5	319.9	.0	2,156.8	1.2
Owen	8.0	73.7	27.7	.0	109.5	4.0
Anderson and Washington	33.9	62.1	27.3	.0	123.3	13.7
Bath and Montgomery	55.5	45.2	7.4	.0	108.1	4.6
Boone, Campbell, Kenton	57.9	51.5	14.2	.0	123.5	4.3
Bourbon, Harrison, Nicholas	13.8	25.7	35.4	.0	74.9	17.8
Boyle and Lincoln	38.5	48.2	9.6	.0	96.3	5.1
Bracken and Robertson	13.7	31.5	35.6	.0	80.8	9.7
Carroll and Gallatin	34.3	34.3	15.1	.0	83.7	13.5
Clark, Fayette, Madison	51.2	43.4	23.9	.0	118.5	4.9
Fleming and Mason	84.8	34.1	8.6	.0	127.6	7.8
Franklin, Scott, Woodford	26.7	44.2	43.7	.0	114.5	6.1
Garrard, Jessamine, Mercer	28.2	26.7	32.2	.0	87.1	5.7
Grant and Pendleton	48.9	48.9	50.0	.0	147.7	3.7
Henry, Shelby, Spencer	56.7	38.9	40.9	.0	136.4	12.6
Jefferson, Oldham, Trimble	81.7	15.4	40.1	.0	137.3	12.0
Bluegrass Unit	633.8	623.8	411.8	.0	1,669.4	2.4

Table 195.-continued

(In thousands of acres)

County and geographic unit	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Adair	86.7	37.5	15.0	.0	139.2	3.5
Bullitt	80.5	28.0	10.1	.0	118.7	3.4
Casey	96.2	45.8	6.0	.0	148.0	7.3
Cumberland	53.0	61.0	17.9	.0	131.9	8.5
Grayson	73.7	48.9	25.1	.0	147.8	8.5
Hardin	84.7	12.5	64.4	.0	161.6	8.0
Hart	57.4	44.1	13.3	.0	114.8	9.2
Marion	63.4	14.1	7.0	.0	84.5	5.0
Meade	50.9	19.7	8.7	.0	79.2	5.6
Metcalfe	56.5	23.2	8.0	.0	87.7	4.6
Nelson	57.7	25.7	13.2	.0	96.5	4.9
Pulaski	169.1	12.0	16.8	.0	197.9	3.4
Wayne	109.9	64.1	21.1	.0	195.1	6.1
Clinton and Russell	74.5	36.0	22.7	.0	133.2	10.0
Green, Larue, Taylor	125.3	34.7	28.9	.0	189.0	4.4
Breckenridge and Hancock	127.7	46.1	48.8	.0	222.6	5.9
Pennyroyal Unit	1,367.3	553.3	326.9	.0	2,247.6	1.7
Allen	42.8	30.5	14.3	.0	87.6	15.9
Butler	71.2	38.8	44.4	.0	154.4	11.5
Caldwell	68.9	10.8	14.1	.0	93.9	4.8
Christian	107.1	25.3	18.6	.0	150.9	7.6
Crittenden	57.3	34.6	13.3	.0	105.1	4.4
Hopkins	64.2	54.0	20.2	.0	138.3	8.7
Monroe	54.1	29.0	.0	.0	83.1	16.9
Muhlenberg	39.5	60.0	27.2	.0	126.6	15.0
Ohio	74.3	62.8	62.5	.0	199.6	8.8
Warren	49.7	16.0	19.7	.0	85.3	10.9
Logan, Simpson, Todd	107.0	60.4	24.5	.0	192.0	7.9
Daviess, Henderson, McLean	69.3	26.3	55.4	.0	151.0	10.6
Union and Webster	57.1	24.2	18.3	.0	99.6	10.3
Barren and Edmonson	145.2	14.2	20.6	.0	180.0	5.5
Western Coalfield Unit	1,007.7	486.7	353.0	.0	1,847.5	2.7
Calloway	60.6	16.4	6.8	.0	83.8	6.8
Graves	32.2	32.0	12.2	.0	76.4	6.9
Livingston	38.6	18.8	39.4	.0	96.8	10.4
Lyon	48.4	26.7	10.6	.0	85.7	10.2
Marshall	63.4	11.6	11.0	.0	86.0	14.5
Trigg	76.5	52.4	30.5	.0	159.4	6.9
Ballard and McCracken	47.9	6.5	44.2	.0	98.6	18.3
Carlisle, Fulton, Hickman	54.0	21.0	9.8	.0	84.8	13.0
Western Unit	421.5	185.3	164.6	.0	771.4	4.0
State total	7,122.6	3,196.9	2,027.9	.0	12,347.4	.8
SE	2.0	4.0	5.6	.0	.8	

Table 196.--Area of timberland by county, geographic unit, and cubic-foot stand-volume class, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
Floyd	20.6	52.2	44.3	44.3	37.9	6.3	205.6	4.6
Harlan	21.0	64.1	99.3	47.1	40.3	.0	271.8	3.7
Knott	7.6	36.8	60.7	53.8	37.9	.0	196.7	3.8
Leslie	21.1	55.5	75.3	48.9	26.4	5.3	232.5	2.5
Letcher	10.5	53.3	39.9	59.2	7.4	13.0	183.3	2.3
Martin	6.9	42.6	6.9	41.1	13.7	.0	111.2	7.9
Perry	30.1	41.9	33.9	23.0	45.2	5.6	179.7	5.5
Pike	28.9	85.9	67.4	119.8	88.3	32.9	423.2	4.1
Eastern Unit	146.8	432.3	427.6	437.1	297.1	63.1	1,804.0	1.5
Carter	18.3	46.5	63.9	37.8	11.6	5.8	184.0	5.2
Elliot	14.0	14.4	63.7	25.0	7.2	.0	124.4	6.8
Johnson	16.7	29.6	13.8	37.8	10.2	6.5	114.6	13.0
Lawrence	11.9	57.8	54.7	59.2	7.2	.0	190.8	7.2
Lewis	7.9	54.3	58.7	32.2	54.3	21.7	229.2	3.2
Magoffin	.0	48.0	66.2	31.2	6.5	5.1	157.0	4.6
Morgan	.0	38.6	39.5	55.6	31.0	25.3	189.9	6.4
Rowan	5.5	5.5	28.5	62.4	20.0	11.9	133.9	2.6
Wolfe	13.3	.0	29.2	31.8	18.1	14.6	107.0	6.9
Boyd and Greenup	27.5	45.2	86.8	37.5	26.3	6.6	229.9	7.6
Menifee and Powell	11.4	11.5	36.5	58.3	31.4	40.9	189.9	5.0
Northern Cumberland Unit	126.6	351.5	541.6	468.9	223.7	138.4	1,850.7	1.9
Bell	18.2	28.8	52.6	49.4	32.9	21.4	203.3	2.3
Breathitt	1.6	80.4	105.5	81.3	3.1	11.0	283.0	4.1
Clay	20.6	73.4	79.7	35.8	18.1	26.5	254.1	2.2
Estill	20.6	33.2	35.4	27.2	6.3	.0	122.7	2.8

Table 196.-continued

(In thousands of acres)

County and geographic unit	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
Jackson	22.6	24.9	87.8	11.7	29.3	.0	176.3	7.3
Knox	8.7	32.9	61.4	44.0	33.8	.0	180.9	6.7
Laurel	.0	8.8	23.5	71.1	38.4	26.7	168.5	3.4
McCreary	15.2	53.5	34.7	47.7	36.7	15.2	202.9	1.2
Rockcastle	.0	20.0	20.0	53.3	39.9	6.7	139.8	2.8
Whitley	18.0	37.8	41.3	35.6	47.7	26.9	207.3	5.0
Lee and Owsley	9.6	52.5	96.7	37.3	13.2	8.4	217.9	3.4
Southern Cumberland Unit	135.1	446.4	638.6	494.4	299.5	142.8	2,156.8	1.2
Owen	13.9	63.5	24.1	8.0	.0	.0	109.5	4.0
Anderson and Washington	15.8	30.5	53.5	16.1	7.5	.0	123.3	13.7
Bath and Montgomery	18.9	11.4	52.1	18.3	.0	7.4	108.1	4.6
Boone, Campbell, Kenton	21.9	42.5	43.7	7.7	.0	7.7	123.5	4.3
Bourbon, Harrison, Nicholas	33.5	21.6	5.9	7.8	.0	5.9	74.9	17.8
Boyle and Lincoln	.0	38.5	28.9	9.6	9.6	9.6	96.3	5.1
Bracken and Robertson	42.5	38.3	.0	.0	.0	.0	80.8	9.7
Carroll and Gallatin	26.6	5.7	40.0	11.4	.0	.0	83.7	13.5
Clark, Fayette, Madison	31.1	29.0	36.8	7.2	14.5	.0	118.5	4.9
Fleming and Mason	8.6	51.8	16.5	34.1	16.5	.0	127.6	7.8
Franklin, Scott, Woodford	48.2	22.7	30.6	13.0	.0	.0	114.5	6.1
Garrard, Jessamine, Mercer	25.1	21.2	26.7	14.1	.0	.0	87.1	5.7
Grant and Pendleton	48.9	50.0	22.7	8.7	8.7	8.7	147.7	3.7
Henry, Shelby, Spencer	34.4	32.4	63.1	.0	6.5	.0	136.4	12.6
Jefferson, Oldham, Trimble	20.0	25.5	50.9	30.8	.0	10.0	137.3	12.0
Bluegrass Unit	389.4	484.5	495.6	187.2	63.3	49.5	1,669.4	2.4

Table 196.-continued

(In thousands of acres)

County and geographic unit	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
Adair	7.5	22.5	31.0	46.0	7.5	24.6	139.2	3.5
Bullitt	10.1	28.0	7.8	49.2	15.7	7.8	118.7	3.4
Casey	6.0	30.1	45.8	30.1	30.1	6.0	148.0	7.3
Cumberland	17.9	18.6	35.8	41.7	6.0	11.9	131.9	8.5
Grayson	33.8	33.5	35.9	18.5	17.4	8.7	147.8	8.5
Hardin	40.4	40.7	37.8	18.7	6.2	17.7	161.6	8.0
Hart	20.9	7.6	63.5	.0	7.6	15.2	114.8	9.2
Marion	7.0	.0	42.2	21.1	7.0	7.0	84.5	5.0
Meade	5.8	8.7	29.5	12.7	12.7	9.8	79.2	5.6
Metcalfe	5.8	13.8	34.8	13.8	13.8	5.8	87.7	4.6
Nelson	13.8	12.5	19.4	18.8	18.8	13.2	96.5	4.9
Pulaski	.0	45.6	37.2	64.7	46.8	3.6	197.9	3.4
Wayne	17.8	27.9	85.4	25.6	38.4	.0	195.1	6.1
Clinton and Russell	11.9	16.8	34.8	54.1	9.6	6.0	133.2	10.0
Green, Larue, Taylor	28.9	18.5	89.3	40.9	6.2	5.2	189.0	4.4
Breckenridge and Hancock	30.2	51.1	62.0	61.7	17.5	.0	222.6	5.9
Pennyroyal Unit	257.9	375.9	692.3	517.7	261.2	142.6	2,247.6	1.7
Allen	8.9	16.2	29.7	12.5	7.1	13.1	87.6	15.9
Butler	23.7	51.2	31.3	27.5	20.7	.0	154.4	11.5
Caldwell	8.7	25.0	16.2	28.5	15.5	.0	93.9	4.8
Christian	14.8	36.4	70.4	29.3	.0	.0	150.9	7.6
Crittenden	.0	21.3	19.9	42.6	21.3	.0	105.1	4.4
Hopkins	20.1	20.3	57.4	25.4	15.1	.0	138.3	8.7
Monroe	.0	.0	42.5	11.6	5.8	23.2	83.1	16.9
Muhlenberg	27.7	31.4	47.1	12.9	7.6	.0	126.6	15.0
Ohio	50.3	72.6	43.2	20.1	6.7	6.7	199.6	8.8

Table 196.-continued

(In thousands of acres)

County and geographic unit	Stand-volume class (cubic feet per acre)						All classes	SE
	0-499	500-999	1000-1499	1500-1999	2000-2499	2500+		
Warren	14.1	21.6	28.0	21.6	.0	.0	85.3	10.9
Logan, Simpson, Todd	25.1	48.8	60.2	30.1	24.1	3.6	192.0	7.9
Daviess, Henderson, McLean	43.9	43.0	11.0	26.6	7.9	18.7	151.0	10.6
Union and Webster	11.5	13.6	35.3	30.6	.0	8.5	99.6	10.3
Barren and Edmonson	20.6	23.8	24.1	58.3	53.2	.0	180.0	5.5
Western Coalfield Unit	269.5	425.1	516.5	377.6	185.1	73.7	1,847.5	2.7
Calloway	.0	33.7	20.0	13.2	3.2	13.7	83.8	6.8
Graves	7.1	32.0	7.4	12.4	12.4	5.1	76.4	6.9
Livingston	24.7	29.5	15.6	11.5	15.6	.0	96.8	10.4
Lyon	14.8	.9	20.4	42.9	.0	6.8	85.7	10.2
Marshall	11.0	9.4	28.7	16.2	20.6	.0	86.0	14.5
Trigg	16.2	41.4	31.0	40.2	16.3	14.4	159.4	6.9
Ballard and McCracken	37.8	9.1	12.9	12.9	19.4	6.5	98.6	18.3
Carlisle, Fulton, Hickman	5.2	20.1	25.1	4.6	14.9	14.9	84.8	13.0
Western Unit	116.7	175.9	161.1	154.0	102.4	61.3	771.4	4.0
State total	1,441.9	2,691.6	3,473.1	2,636.9	1,432.3	671.5	12,347.4	.8
SE	6.9	4.5	3.8	4.6	6.4	9.7	.8	

Table 197.--Area of timberland by county, geographic unit, and dry ton stand-volume class, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Stand-volume class (dry tons per acre)									All classes	SE
	0-24	25-49	50-74	75-99	100-124	125-149	150-174	175-199	200+		
Floyd	27.8	64.1	82.2	25.3	6.3	.0	.0	.0	.0	205.6	4.6
Harlan	21.0	102.9	100.8	47.1	.0	.0	.0	.0	.0	271.8	3.7
Knott	7.6	74.1	99.9	15.2	.0	.0	.0	.0	.0	196.7	3.8
Leslie	27.8	66.0	100.4	38.3	.0	.0	.0	.0	.0	232.5	2.5
Letcher	10.5	72.3	55.1	32.4	13.0	.0	.0	.0	.0	183.3	2.3
Martin	13.7	49.5	48.0	.0	.0	.0	.0	.0	.0	111.2	7.9
Perry	43.7	44.9	40.3	50.8	.0	.0	.0	.0	.0	179.7	5.5
Pike	36.2	116.9	140.7	106.6	22.8	.0	.0	.0	.0	423.2	4.1
Eastern Unit	188.3	590.6	667.3	315.6	42.1	.0	.0	.0	.0	1,804.0	1.5
Carter	30.0	98.8	49.4	5.8	.0	.0	.0	.0	.0	184.0	5.2
Elliot	14.0	82.8	27.6	.0	.0	.0	.0	.0	.0	124.4	6.8
Johnson	23.2	30.5	47.1	13.8	.0	.0	.0	.0	.0	114.6	13.0
Lawrence	25.3	80.2	85.3	.0	.0	.0	.0	.0	.0	190.8	7.2
Lewis	15.8	93.4	81.2	32.8	5.9	.0	.0	.0	.0	229.2	3.2
Magoffin	6.5	76.4	55.9	18.2	.0	.0	.0	.0	.0	157.0	4.6
Morgan	12.3	69.7	74.1	33.8	.0	.0	.0	.0	.0	189.9	6.4
Rowan	5.5	32.7	60.8	34.8	.0	.0	.0	.0	.0	133.9	2.6
Wolfe	13.3	31.8	55.0	6.9	.0	.0	.0	.0	.0	107.0	6.9
Boyd and Greenup	21.0	111.8	71.8	25.3	.0	.0	.0	.0	.0	229.9	7.6
Menifee and Powell	18.0	19.7	113.7	38.6	.0	.0	.0	.0	.0	189.9	5.0
Northern Cumberland Unit	184.9	727.8	722.1	210.0	5.9	.0	.0	.0	.0	1,850.7	1.9
Bell	21.4	53.6	102.0	26.3	.0	.0	.0	.0	.0	203.3	2.3
Breathitt	4.2	103.0	139.6	34.7	1.6	.0	.0	.0	.0	283.0	4.1
Clay	32.2	95.9	90.5	22.1	13.5	.0	.0	.0	.0	254.1	2.2
Estill	26.9	49.7	39.8	6.3	.0	.0	.0	.0	.0	122.7	2.8

Table 197.-continued

(In thousands of acres)

County and geographic unit	Stand-volume class (dry tons per acre)									All classes	SE
	0-24	25-49	50-74	75-99	100-124	125-149	150-174	175-199	200+		
Jackson	22.6	55.7	80.5	17.6	.0	.0	.0	.0	.0	176.3	7.3
Knox	14.2	66.8	83.4	11.0	5.5	.0	.0	.0	.0	180.9	6.7
Laurel	2.9	35.5	74.0	41.3	14.9	.0	.0	.0	.0	168.5	3.4
McCreary	8.6	77.3	84.6	25.9	6.5	.0	.0	.0	.0	202.9	1.2
Rockcastle	.0	33.3	59.9	46.6	.0	.0	.0	.0	.0	139.8	2.8
Whitley	18.0	64.7	91.5	24.4	8.6	.0	.0	.0	.0	207.3	5.0
Lee and Owsley	31.7	92.3	80.7	13.2	.0	.0	.0	.0	.0	217.9	3.4
Southern Cumberland Unit	182.7	727.7	926.5	269.3	50.6	.0	.0	.0	.0	2,156.8	1.2
Owen	5.8	71.5	32.2	.0	.0	.0	.0	.0	.0	109.5	4.0
Anderson and Washington	15.8	52.9	23.6	31.1	.0	.0	.0	.0	.0	123.3	13.7
Bath and Montgomery	18.9	41.2	31.5	9.2	.0	7.4	.0	.0	.0	108.1	4.6
Boone, Campbell, Kenton	21.9	64.4	29.6	.0	7.7	.0	.0	.0	.0	123.5	4.3
Bourbon, Harrison, Nicholas	31.6	21.6	15.7	5.9	.0	.0	.0	.0	.0	74.9	17.8
Boyle and Lincoln	.0	48.2	28.9	9.6	9.6	.0	.0	.0	.0	96.3	5.1
Bracken and Robertson	17.8	51.9	11.0	.0	.0	.0	.0	.0	.0	80.8	9.7
Carroll and Gallatin	20.8	22.9	40.0	.0	.0	.0	.0	.0	.0	83.7	13.5
Clark, Fayette, Madison	18.3	60.1	25.6	14.5	.0	.0	.0	.0	.0	118.5	4.9
Fleming and Mason	8.6	43.6	67.1	8.2	.0	.0	.0	.0	.0	127.6	7.8
Franklin, Scott, Woodford	30.6	53.3	30.6	.0	.0	.0	.0	.0	.0	114.5	6.1
Garrard, Jessamine, Mercer	25.1	40.8	21.2	.0	.0	.0	.0	.0	.0	87.1	5.7
Grant and Pendleton	30.3	76.1	23.9	.0	17.4	.0	.0	.0	.0	147.7	3.7
Henry, Shelby, Spencer	23.1	55.0	45.3	13.0	.0	.0	.0	.0	.0	136.4	12.6
Jefferson, Oldham, Trimble	20.0	35.5	46.2	35.5	.0	.0	.0	.0	.0	137.3	12.0
Bluegrass Unit	288.8	739.1	472.4	127.0	34.8	7.4	.0	.0	.0	1,669.4	2.4

Table 197.-continued

(In thousands of acres)

County and geographic unit	Stand-volume class (dry tons per acre)									All classes	SE
	0-24	25-49	50-74	75-99	100-124	125-149	150-174	175-199	200+		
Adair	15.0	38.5	46.0	39.6	.0	.0	.0	.0	.0	139.2	3.5
Bullitt	10.1	43.7	49.2	7.8	7.8	.0	.0	.0	.0	118.7	3.4
Casey	6.0	63.8	60.1	18.0	.0	.0	.0	.0	.0	148.0	7.3
Cumberland	19.3	41.1	53.6	17.9	.0	.0	.0	.0	.0	131.9	8.5
Grayson	21.9	72.6	44.6	8.7	.0	.0	.0	.0	.0	147.8	8.5
Hardin	34.2	60.8	48.9	17.7	.0	.0	.0	.0	.0	161.6	8.0
Hart	13.3	44.1	42.2	7.6	7.6	.0	.0	.0	.0	114.8	9.2
Marion	7.0	7.0	56.3	7.0	7.0	.0	.0	.0	.0	84.5	5.0
Meade	8.7	25.4	25.4	9.8	.0	.0	9.8	.0	.0	79.2	5.6
Metcalfe	8.0	37.0	42.8	.0	.0	.0	.0	.0	.0	87.7	4.6
Nelson	13.2	13.2	38.2	19.4	12.5	.0	.0	.0	.0	96.5	4.9
Pulaski	.0	62.4	98.3	37.2	.0	.0	.0	.0	.0	197.9	3.4
Wayne	11.4	79.1	85.4	19.2	.0	.0	.0	.0	.0	195.1	6.1
Clinton and Russell	17.9	22.8	74.5	18.0	.0	.0	.0	.0	.0	133.2	10.0
Green, Larue, Taylor	28.9	71.7	58.4	29.9	.0	.0	.0	.0	.0	189.0	4.4
Breckenridge and Hancock	34.5	71.4	108.1	8.6	.0	.0	.0	.0	.0	222.6	5.9
Pennyroyal Unit	249.4	754.6	932.2	266.6	35.0	.0	9.8	.0	.0	2,247.6	1.7
Allen	8.9	22.8	42.8	6.6	6.6	.0	.0	.0	.0	87.6	15.9
Butler	32.4	66.9	34.5	20.6	.0	.0	.0	.0	.0	154.4	11.5
Caldwell	8.7	30.4	40.7	5.4	8.7	.0	.0	.0	.0	93.9	4.8
Christian	30.7	55.3	52.7	12.3	.0	.0	.0	.0	.0	150.9	7.6
Crittenden	6.6	19.9	63.9	14.7	.0	.0	.0	.0	.0	105.1	4.4
Hopkins	20.3	39.3	57.0	21.8	.0	.0	.0	.0	.0	138.3	8.7
Monroe	.0	11.6	48.3	5.8	17.4	.0	.0	.0	.0	83.1	16.9
Muhlenberg	27.7	55.6	35.8	7.6	.0	.0	.0	.0	.0	126.6	15.0
Ohio	51.5	91.4	43.3	13.4	.0	.0	.0	.0	.0	199.6	8.8

Table 197.-continued

(In thousands of acres)

County and geographic unit	Stand-volume class (dry tons per acre)									All classes	SE
	0-24	25-49	50-74	75-99	100-124	125-149	150-174	175-199	200+		
Warren	14.1	44.1	27.2	.0	.0	.0	.0	.0	.0	85.3	10.9
Logan, Simpson, Todd	19.0	79.5	59.8	30.1	3.6	.0	.0	.0	.0	192.0	7.9
Daviess, Henderson, McLean	43.9	43.0	37.6	15.6	11.0	.0	.0	.0	.0	151.0	10.6
Union and Webster	6.8	35.7	48.6	.0	.0	8.5	.0	.0	.0	99.6	10.3
Barren and Edmonson	26.8	32.1	96.8	24.4	.0	.0	.0	.0	.0	180.0	5.5
Western Coalfield Unit	297.4	627.2	689.0	178.2	47.2	8.5	.0	.0	.0	1,847.5	2.7
Calloway	.0	43.7	23.2	10.0	6.8	.0	.0	.0	.0	83.8	6.8
Graves	9.2	37.3	17.5	12.4	.0	.0	.0	.0	.0	76.4	6.9
Livingston	17.3	36.8	23.0	15.6	4.1	.0	.0	.0	.0	96.8	10.4
Lyon	14.8	7.7	56.5	6.8	.0	.0	.0	.0	.0	85.7	10.2
Marshall	.0	49.1	11.6	25.3	.0	.0	.0	.0	.0	86.0	14.5
Trigg	16.2	68.7	56.4	11.0	7.2	.0	.0	.0	.0	159.4	6.9
Ballard and McCracken	37.8	15.5	25.9	12.9	6.5	.0	.0	.0	.0	98.6	18.3
Carlisle, Fulton, Hickman	.0	29.9	29.7	14.9	10.3	.0	.0	.0	.0	84.8	13.0
Western Unit	95.1	288.7	243.6	109.0	34.9	.0	.0	.0	.0	771.4	4.0
State total	1,486.7	4,455.7	4,653.0	1,475.8	250.4	16.0	9.8	.0	.0	12,347.4	.8
SE	6.8	3.2	3.1	6.4	16.1	70.9	100.0	.0	.0	.8	

Table 198.--Area of timberland by county, geographic unit, and stocking class of growing-stock trees, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
Floyd	.0	19.8	52.2	108.3	25.3	205.6	4.6
Harlan	.0	39.2	67.2	126.6	38.8	271.8	3.7
Knott	.0	14.6	38.5	112.6	31.0	196.7	3.8
Leslie	.0	21.1	99.1	91.1	21.1	232.5	2.5
Letcher	.0	26.9	67.3	59.2	29.9	183.3	2.3
Martin	.0	22.0	41.1	34.3	13.7	111.2	7.9
Perry	.0	12.1	65.2	62.9	39.5	179.7	5.5
Pike	.0	29.1	127.1	179.3	87.7	423.2	4.1
Eastern Unit	.0	184.9	557.8	774.4	286.9	1,804.0	1.5
Carter	.0	18.3	66.9	93.0	5.8	184.0	5.2
Elliot	.0	14.0	56.5	33.5	20.4	124.4	6.8
Johnson	.0	19.6	20.3	58.1	16.6	114.6	13.0
Lawrence	.0	19.1	86.3	76.8	8.6	190.8	7.2
Lewis	.0	21.7	75.2	85.1	47.2	229.2	3.2
Magoffin	.0	.0	61.0	84.3	11.6	157.0	4.6
Morgan	.0	4.6	61.2	101.9	22.2	189.9	6.4
Rowan	.0	.0	31.9	68.0	34.0	133.9	2.6
Wolfe	.0	.0	39.6	38.2	29.2	107.0	6.9
Boyd and Greenup	.0	29.0	98.6	82.5	19.9	229.9	7.6
Menifee and Powell	.0	6.5	34.3	66.7	82.3	189.9	5.0
Northern Cumberland Unit	.0	132.9	631.7	788.1	298.0	1,850.7	1.9
Bell	.0	7.4	77.3	74.0	44.5	203.3	2.3
Breathitt	.0	16.8	88.8	149.1	28.3	283.0	4.1
Clay	.0	18.9	112.1	87.5	35.6	254.1	2.2
Estill	.0	6.3	47.8	56.0	12.6	122.7	2.8
Jackson	.0	13.5	51.6	87.8	23.4	176.3	7.3
Knox	.0	8.7	49.5	105.3	17.4	180.9	6.7
Laurel	.0	.0	23.5	56.2	88.8	168.5	3.4
McCreary	.0	2.1	61.5	54.3	85.1	202.9	1.2
Rockcastle	.0	.0	20.0	79.9	39.9	139.8	2.8
Whitley	.0	3.1	71.0	56.4	76.8	207.3	5.0
Lee and Owsley	.0	18.5	84.7	88.3	26.5	217.9	3.4
Southern Cumberland Unit	.0	95.4	687.8	894.7	478.9	2,156.8	1.2
Owen	.0	.0	49.6	38.0	21.9	109.5	4.0
Anderson and Washington	.0	15.8	57.5	42.6	7.5	123.3	13.7
Bath and Montgomery	.0	11.4	26.3	46.3	24.0	108.1	4.6
Boone, Campbell, Kenton	.0	20.6	65.6	21.9	15.4	123.5	4.3
Bourbon, Harrison, Nicholas	.0	.0	47.3	27.6	.0	74.9	17.8
Boyle and Lincoln	.0	9.6	38.5	28.9	19.3	96.3	5.1
Bracken and Robertson	.0	20.5	46.6	.0	13.7	80.8	9.7
Carroll and Gallatin	.0	.0	34.3	17.2	32.3	83.7	13.5
Clark, Fayette, Madison	.0	20.0	43.9	43.4	11.1	118.5	4.9
Fleming and Mason	.0	9.4	51.0	41.2	25.9	127.6	7.8
Franklin, Scott, Woodford	.0	4.5	57.8	26.1	26.1	114.5	6.1
Garrard, Jessamine, Mercer	.0	12.6	26.7	33.8	14.1	87.1	5.7
Grant and Pendleton	.0	22.7	47.7	51.1	26.1	147.7	3.7
Henry, Shelby, Spencer	.0	24.7	37.2	43.7	30.8	136.4	12.6
Jefferson, Oldham, Trimble	.0	20.0	46.2	55.6	15.4	137.3	12.0
Bluegrass Unit	.0	191.9	676.6	517.3	283.6	1,669.4	2.4

Table 198.-continued

(In thousands of acres)

County and geographic unit	Stocking class					All classes	SE
	Nonstocked	Poorly stocked	Moderately stocked	Fully stocked	Over-stocked		
Adair	.0	15.0	31.0	61.0	32.1	139.2	3.5
Bullitt	.0	.0	35.9	57.1	25.8	118.7	3.4
Casey	.0	6.0	81.9	42.1	18.0	148.0	7.3
Cumberland	.0	17.2	41.7	55.0	17.9	131.9	8.5
Grayson	.0	15.6	44.8	61.4	26.1	147.8	8.5
Hardin	.0	19.1	50.2	74.6	17.7	161.6	8.0
Hart	.0	7.6	54.1	45.6	7.6	114.8	9.2
Marion	.0	.0	35.2	35.2	14.1	84.5	5.0
Meade	.0	.0	27.2	32.4	19.7	79.2	5.6
Metcalfe	.0	5.8	37.0	39.1	5.8	87.7	4.6
Nelson	.0	6.9	19.4	50.8	19.4	96.5	4.9
Pulaski	.0	8.4	62.4	85.1	42.0	197.9	3.4
Wayne	.0	6.4	59.6	97.1	32.0	195.1	6.1
Clinton and Russell	.0	11.9	24.0	73.3	24.0	133.2	10.0
Green, Larue, Taylor	.0	11.4	82.7	77.3	17.6	189.0	4.4
Breckenridge and Hancock	.0	13.2	94.3	93.0	22.1	222.6	5.9
Pennyroyal Unit	.0	144.4	781.3	980.1	341.8	2,247.6	1.7
Allen	.0	.0	29.3	30.8	27.4	87.6	15.9
Butler	.0	7.0	83.1	36.9	27.5	154.4	11.5
Caldwell	.0	.0	35.8	42.6	15.5	93.9	4.8
Christian	.0	18.6	60.2	65.7	6.5	150.9	7.6
Crittenden	.0	.0	27.9	69.1	8.0	105.1	4.4
Hopkins	.0	13.4	51.8	54.0	19.2	138.3	8.7
Monroe	.0	.0	30.9	23.2	29.0	83.1	16.9
Muhlenberg	.0	5.7	76.3	33.8	10.9	126.6	15.0
Ohio	.0	19.8	90.8	47.5	41.5	199.6	8.8
Warren	.0	16.0	45.5	23.9	.0	85.3	10.9
Logan, Simpson, Todd	.0	6.1	72.9	78.4	34.7	192.0	7.9
Daviess, Henderson, McLean	.0	27.6	42.9	54.0	26.6	151.0	10.6
Union and Webster	.0	.0	45.1	45.9	8.5	99.6	10.3
Barren and Edmonson	.0	12.6	67.1	68.0	32.3	180.0	5.5
Western Coalfield Unit	.0	126.7	759.6	673.6	287.6	1,847.5	2.7
Calloway	.0	13.7	23.7	36.4	10.0	83.8	6.8
Graves	.0	5.1	36.3	29.9	5.1	76.4	6.9
Livingston	.0	15.3	20.8	45.1	15.6	96.8	10.4
Lyon	.0	17.7	16.5	30.2	21.2	85.7	10.2
Marshall	.0	6.2	27.2	23.1	29.5	86.0	14.5
Trigg	.0	.0	43.6	69.0	46.8	159.4	6.9
Ballard and McCracken	.0	23.2	30.1	12.9	32.3	98.6	18.3
Carlisle, Fulton, Hickman	.0	5.7	38.4	25.8	14.9	84.8	13.0
Western Unit	.0	87.0	236.6	272.4	175.4	771.4	4.0
State total	.0	963.2	4,331.3	4,900.5	2,152.3	12,347.4	.8
SE	.0	8.7	3.4	3.0	5.3	.8	

Table 199.--Area of timberland by county, geographic unit, and site productivity class, Kentucky, 1988

(In thousands of acres)

County and geographic unit	Productivity class(cuft/a/yr) Very good (120+)	Good (85-119)	Fair (50-84)	Poor (20-49)	All classes	SE
Floyd	.0	71.2	56.9	77.5	205.6	4.6
Harlan	40.3	40.3	94.1	97.0	271.8	3.7
Knott	22.7	59.6	75.9	38.5	196.7	3.8
Leslie	31.7	70.0	83.2	47.6	232.5	2.5
Letcher	6.9	73.3	67.1	35.9	183.3	2.3
Martin	.0	20.6	61.7	28.9	111.2	7.9
Perry	39.5	57.7	46.4	36.2	179.7	5.5
Pike	64.0	120.7	132.9	105.5	423.2	4.1
Eastern Unit	205.3	513.4	618.2	467.1	1,804.0	1.5
Carter	17.4	40.7	49.4	76.5	184.0	5.2
Elliot	.0	26.3	61.2	36.9	124.4	6.8
Johnson	10.2	13.8	53.6	37.1	114.6	13.0
Lawrence	13.3	25.3	102.1	50.0	190.8	7.2
Lewis	13.2	11.7	44.0	160.3	229.2	3.2
Magoffin	11.6	34.9	70.4	40.0	157.0	4.6
Morgan	7.7	17.8	86.2	78.2	189.9	6.4
Rowan	.0	9.7	55.6	68.5	133.9	2.6
Wolfe	17.2	14.6	36.1	39.0	107.0	6.9
Boyd and Greenup	17.9	25.6	39.7	146.7	229.9	7.6
Menifee and Powell	17.8	9.9	56.2	106.1	189.9	5.0
Northern Cumberland Unit	126.4	230.4	654.6	839.3	1,850.7	1.9
Bell	21.2	76.7	59.3	46.0	203.3	2.3
Breathitt	38.9	93.9	111.3	38.9	283.0	4.1
Clay	26.5	68.4	101.0	58.3	254.1	2.2
Estill	30.7	19.0	37.9	35.1	122.7	2.8
Jackson	.0	38.0	50.1	88.2	176.3	7.3
Knox	.0	39.3	99.9	41.7	180.9	6.7
Laurel	29.6	17.8	73.7	47.4	168.5	3.4
McCreary	6.5	26.6	85.3	84.6	202.9	1.2
Rockcastle	6.7	46.6	73.2	13.3	139.8	2.8
Whitley	38.6	41.3	25.9	101.4	207.3	5.0
Lee and Owsley	44.1	62.6	48.1	63.0	217.9	3.4
Southern Cumberland Unit	242.8	530.2	765.9	617.9	2,156.8	1.2
Owen	.0	.0	43.8	65.7	109.5	4.0
Anderson and Washington	.0	15.0	29.9	78.5	123.3	13.7
Bath and Montgomery	7.4	14.9	24.0	61.8	108.1	4.6
Boone, Campbell, Kenton	12.9	14.2	38.6	57.9	123.5	4.3
Bourbon, Harrison, Nicholas	.0	.0	29.5	45.4	74.9	17.8
Boyle and Lincoln	.0	9.6	48.2	38.5	96.3	5.1
Bracken and Robertson	17.8	6.8	13.7	42.5	80.8	9.7
Carroll and Gallatin	.0	5.7	5.7	72.3	83.7	13.5
Clark, Fayette, Madison	7.2	.0	32.9	78.4	118.5	4.9
Fleming and Mason	8.2	24.7	60.0	34.5	127.6	7.8
Franklin, Scott, Woodford	4.5	13.0	17.6	79.4	114.5	6.1
Garrard, Jessamine, Mercer	.0	.0	21.2	65.9	87.1	5.7
Grant and Pendleton	.0	.0	48.9	98.9	147.7	3.7
Henry, Shelby, Spencer	11.8	13.0	37.2	74.5	136.4	12.6
Jefferson, Oldham, Trimble	25.5	25.5	15.4	70.9	137.3	12.0
Bluegrass Unit	95.4	142.3	466.6	965.2	1,669.4	2.4

Table 199.-continued

(In thousands of acres)

County and geographic unit	Productivity class(cuft/a/yr)				All classes	SE
	Very good (120+)	Good (85-119)	Fair (50-84)	Poor (20-49)		
Adair	16.0	7.5	23.5	92.1	139.2	3.5
Bullitt	.0	7.8	39.1	71.7	118.7	3.4
Casey	18.0	12.0	51.8	66.1	148.0	7.3
Cumberland	11.9	17.9	29.8	72.3	131.9	8.5
Grayson	8.7	39.7	31.0	68.4	147.8	8.5
Hardin	11.5	25.3	61.7	63.1	161.6	8.0
Hart	5.7	36.5	36.5	36.1	114.8	9.2
Marion	.0	7.0	21.1	56.3	84.5	5.0
Meade	.0	25.4	25.4	28.3	79.2	5.6
Metcalfe	8.0	19.6	31.2	29.0	87.7	4.6
Nelson	6.3	6.3	12.5	71.4	96.5	4.9
Pulaski	30.0	33.6	75.6	58.8	197.9	3.4
Wayne	19.2	46.7	71.5	57.7	195.1	6.1
Clinton and Russell	.0	16.8	40.9	75.5	133.2	10.0
Green, Larue, Taylor	11.4	46.1	42.2	89.3	189.0	4.4
Breckenridge and Hancock	17.8	4.3	83.5	116.9	222.6	5.9
Pennyroyal Unit	164.5	352.5	677.4	1,053.1	2,247.6	1.7
Allen	.0	12.0	41.1	34.5	87.6	15.9
Butler	.0	24.4	31.9	98.1	154.4	11.5
Caldwell	6.8	8.7	37.2	41.2	93.9	4.8
Christian	17.0	11.2	37.5	85.3	150.9	7.6
Crittenden	14.7	21.3	19.9	49.2	105.1	4.4
Hopkins	13.5	28.6	25.4	70.9	138.3	8.7
Monroe	.0	5.8	11.6	65.7	83.1	16.9
Muhlenberg	.0	22.9	23.7	80.0	126.6	15.0
Ohio	13.5	17.6	53.2	115.3	199.6	8.8
Warren	16.0	5.6	11.2	52.5	85.3	10.9
Logan, Simpson, Todd	5.5	12.0	45.7	128.8	192.0	7.9
Daviess, Henderson, McLean	26.8	18.7	58.1	47.5	151.0	10.6
Union and Webster	17.0	18.3	30.6	33.6	99.6	10.3
Barren and Edmonson	28.8	14.5	22.2	114.5	180.0	5.5
Western Coalfield Unit	159.6	221.6	449.2	1,017.2	1,847.5	2.7
Calloway	6.3	13.7	23.2	40.5	83.8	6.8
Graves	17.5	7.1	19.8	32.0	76.4	6.9
Livingston	7.4	.0	36.8	52.6	96.8	10.4
Lyon	6.8	23.3	28.4	27.1	85.7	10.2
Marshall	11.6	13.1	34.7	26.7	86.0	14.5
Trigg	14.4	29.1	36.4	79.6	159.4	6.9
Ballard and McCracken	15.5	12.9	25.9	44.2	98.6	18.3
Carlisle, Fulton, Hickman	30.4	9.2	29.9	15.3	84.8	13.0
Western Unit	109.9	108.5	235.0	318.0	771.4	4.0
State total	1,103.8	2,098.9	3,866.9	5,277.7	12,347.4	.8
SE	7.5	5.2	3.5	2.8	.8	

Table 200.--Net volume of growing-stock trees on timberland by county, geographic unit, and forest-type group, Kentucky, 1988

(In millions of cubic feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Floyd	.0	.0	4.3	.0	272.3	.0	.0	5.5	.0	282.0	8.9
Harlan	.0	.0	25.3	9.3	237.0	.0	.0	49.2	.0	320.7	6.7
Knott	.0	.0	2.6	.0	260.3	.0	.0	5.8	.0	268.6	8.4
Leslie	1.4	.0	.0	.0	257.5	.0	.0	29.3	.0	288.2	8.6
Letcher	1.0	.0	.0	5.4	221.7	.0	.0	.0	.0	228.2	8.1
Martin	.0	.0	.0	6.6	137.0	.0	.0	.0	.0	143.6	11.8
Perry	.0	.0	1.6	.1	222.9	.0	.0	.0	.0	224.6	10.1
Pike	.0	.0	.0	6.1	572.2	.0	.0	50.1	.0	628.3	6.3
Eastern Unit	2.4	.0	33.7	27.5	2,180.7	.0	.0	139.7	.0	2,384.2	2.9
Carter	.0	.0	6.8	25.2	196.1	.0	.0	5.6	.0	233.7	8.5
Elliot	.0	.0	.0	8.8	130.8	.0	.0	.0	.0	139.7	9.7
Johnson	.0	.0	6.5	9.5	121.7	.0	.0	.0	.0	137.7	16.4
Lawrence	.0	.0	4.5	11.2	195.7	.0	5.9	.0	.0	217.3	10.8
Lewis	.0	.0	.0	.0	354.3	.0	2.9	.0	.0	357.3	8.0
Magoffin	.0	.0	7.2	4.5	164.2	.0	.0	21.6	.0	197.4	8.9
Morgan	.0	.0	13.7	15.5	273.1	.0	.0	.0	.0	302.3	12.2
Rowan	4.7	.0	.0	6.1	216.2	.0	.0	.0	.0	227.0	7.1
Wolfe	.0	.0	19.7	8.7	142.8	.0	.0	.0	.0	171.2	12.9
Boyd and Greenup	1.2	.0	8.8	17.8	234.5	.0	19.7	.0	.0	282.0	10.9
Menifee and Powell	19.5	.0	26.5	3.3	291.3	.0	.0	4.7	.0	345.3	8.2
Northern Cumberland Unit	25.4	.0	93.6	110.6	2,320.9	.0	28.5	31.9	.0	2,610.9	3.1
Bell	1.6	.0	10.7	.0	252.9	.0	4.6	34.3	.0	304.1	9.2
Breathitt	.0	.0	26.2	4.7	306.3	.0	.0	15.3	.0	352.5	7.4
Clay	.0	.0	19.5	.0	258.4	.0	.0	47.9	.0	325.8	9.2
Estill	.0	.0	11.1	17.9	106.3	.0	.0	.0	.0	135.3	12.6

Table 200.-continued

(In millions of cubic feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Jackson	.0	.0	1.5	16.6	186.8	.0	.0	.0	.0	204.8	7.7
Knox	.0	.0	10.9	3.5	229.8	.0	.0	.0	.0	244.2	10.2
Laurel	.0	.0	57.0	17.3	223.5	.0	13.8	10.7	.0	322.3	7.3
McCreary	5.2	.0	21.4	92.3	163.5	.0	12.1	4.5	.0	299.0	8.8
Rockcastle	.0	.0	19.9	21.6	195.8	.0	.0	7.0	.0	244.3	8.4
Whitley	.0	.0	73.0	27.3	180.0	17.1	12.2	13.0	.0	322.6	8.0
Lee and Owsley	.0	.0	26.8	24.0	192.2	.0	17.5	.0	.0	260.5	8.8
Southern Cumberland Unit	6.9	.0	278.1	225.2	2,295.6	17.1	60.1	132.6	.0	3,015.5	2.6
Owen	.0	.0	3.6	22.6	61.8	.0	2.6	.0	.0	90.5	13.8
Anderson and Washington	.0	.0	6.1	.0	50.1	.0	35.5	35.8	.0	127.5	11.6
Bath and Montgomery	.0	.0	8.1	26.5	95.0	.0	.0	.0	.0	129.6	13.1
Boone, Campbell, Kenton	.0	.0	.0	.0	44.3	.0	13.3	67.2	.0	124.8	17.2
Bourbon, Harrison, Nicholas	.0	.0	.0	4.7	42.7	.0	9.7	.0	.0	57.0	30.6
Boyle and Lincoln	.0	.0	.0	.0	116.7	.0	.0	5.1	.0	121.8	19.1
Bracken and Robertson	.0	.0	2.9	10.5	22.4	.0	1.7	.0	.0	37.5	22.1
Carroll and Gallatin	.0	.0	.0	2.6	54.9	.0	14.0	3.9	.0	75.4	16.8
Clark, Fayette, Madison	.0	.0	3.5	31.8	70.2	.0	7.6	2.0	.0	115.1	16.3
Fleming and Mason	.0	.0	22.3	18.4	103.7	.0	.0	8.2	.0	152.7	12.8
Franklin, Scott, Woodford	.0	.0	2.9	4.9	79.9	.0	.0	3.1	.0	90.9	23.3
Garrard, Jessamine, Mercer	.0	.0	.0	7.0	40.2	.0	27.9	.0	.0	75.1	19.8
Grant and Pendleton	.0	.0	.0	5.2	74.8	.0	60.4	1.6	.0	142.1	21.1
Henry, Shelby, Spencer	.0	.0	11.3	10.5	77.3	.0	8.6	21.8	.0	129.5	11.5
Jefferson, Oldham, Trimble	.0	.0	.0	27.9	97.7	.0	17.5	9.0	.0	152.1	13.6
Bluegrass Unit	.0	.0	60.7	172.6	1,031.5	.0	198.9	157.9	.0	1,621.7	4.4

Table 200.-continued

(In millions of cubic feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Adair	.0	.0	.0	9.9	190.9	.0	.0	17.3	.0	218.1	10.9
Bullitt	.0	.0	39.9	22.6	96.3	.0	.0	13.3	.0	172.1	12.9
Casey	.0	.0	3.5	21.5	180.2	.0	7.1	.0	.0	212.4	11.1
Cumberland	.0	.0	4.5	13.4	137.1	.0	.0	19.5	.0	174.6	12.1
Grayson	.0	.0	30.2	1.1	131.8	.0	.0	8.9	.0	172.1	15.2
Hardin	.0	.0	.1	4.9	116.4	.0	31.5	28.6	.0	181.5	15.4
Hart	.0	.0	24.6	22.5	64.9	.0	18.7	8.4	.0	139.2	16.6
Marion	.0	.0	.0	.0	111.7	.0	.0	12.9	.0	124.5	13.8
Meade	.0	.0	.0	1.1	129.2	.0	.0	.0	.0	130.3	17.8
Metcalfe	.0	.0	.0	4.6	109.7	.0	.0	10.1	.0	124.4	13.8
Nelson	.0	.0	5.6	13.9	88.0	.0	36.9	.0	.0	144.3	15.2
Pulaski	.0	.0	26.9	88.7	179.5	.0	.0	11.9	.0	306.9	7.8
Wayne	.0	.0	9.3	22.9	211.4	.0	.0	14.4	.0	258.1	6.9
Clinton and Russell	.0	.0	.0	15.4	171.6	.0	.0	.0	.0	187.0	9.0
Green, Larue, Taylor	.0	.0	6.2	.0	140.6	.0	19.6	52.1	.0	218.4	9.7
Breckenridge and Hancock	.0	.0	1.4	11.1	234.2	.0	7.1	15.5	.0	269.3	8.6
Pennyroyal Unit	.0	.0	152.3	253.5	2,293.6	.0	120.9	212.9	.0	3,033.2	2.9
Allen	.0	.0	.0	22.6	88.5	.0	1.0	10.1	.0	122.3	14.4
Butler	.0	.0	.0	9.3	149.9	.0	.0	12.8	.0	172.0	13.8
Caldwell	.0	.0	1.4	22.6	78.3	8.4	6.2	7.4	.0	124.3	13.9
Christian	.0	.0	3.7	11.0	144.0	8.6	1.9	.0	.0	169.2	8.3
Crittenden	.0	.0	.0	.0	97.5	.0	46.9	12.1	.0	156.5	11.3
Hopkins	.0	.0	5.7	6.5	123.5	11.4	28.2	.0	.0	175.3	14.6
Monroe	.0	.0	.0	.0	139.2	.0	.0	16.8	.0	156.0	16.1
Muhlenberg	.0	.0	3.0	7.6	60.4	10.4	7.1	37.3	.0	125.8	14.2
Ohio	.0	.0	.0	.0	160.9	3.3	10.7	21.7	.0	196.6	12.8

Table 200.-continued

(In millions of cubic feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Warren	.0	.0	.0	17.2	67.4	.0	4.5	.0	.0	89.0	14.6
Logan, Simpson, Todd	.0	.0	7.4	20.0	204.7	.0	2.6	3.8	.0	238.5	8.9
Daviess, Henderson, McLean	.0	.0	6.3	.0	90.3	5.3	59.2	2.1	.0	163.2	18.3
Union and Webster	.0	.0	.0	.0	85.5	11.2	50.3	.0	.0	146.9	21.7
Barren and Edmonson	.0	.0	.0	.0	220.8	.0	9.0	30.7	.0	260.5	7.4
Western Coalfield Unit	.0	.0	27.5	116.9	1,711.0	58.6	227.5	154.8	.0	2,296.3	3.6
Calloway	.0	.0	14.1	.0	92.4	.0	8.2	.0	.0	114.7	20.6
Graves	.0	.0	.0	1.7	78.6	.0	12.4	.0	.0	92.7	18.1
Livingston	.0	.0	.0	.0	88.1	.0	10.8	5.9	.0	104.7	14.2
Lyon	.0	.0	.0	.9	118.0	.0	.8	.0	.0	119.6	17.5
Marshall	.0	.0	.0	10.8	81.2	.0	8.7	13.9	.0	114.6	11.6
Trigg	.0	.0	11.9	.1	211.6	.0	.0	.0	.0	223.6	12.2
Ballard and McCracken	.0	.0	.0	12.4	63.5	.0	31.8	2.4	.0	110.1	20.3
Carlisle, Fulton, Hickman	.0	.0	.0	.0	56.5	.0	55.4	16.4	.0	128.3	20.1
Western Unit	.0	.0	26.0	25.9	789.7	.0	128.0	38.6	.0	1,008.2	5.9
State total	34.7	.0	671.9	932.2	12,623.1	75.7	763.9	868.3	.0	15,969.9	1.3
SE	59.3	.0	11.9	10.0	1.8	37.0	13.3	11.7	.0	1.3	

Table 201.--Net volume of growing-stock trees on timberland by county, geographic unit, and stand-size class, Kentucky, 1988

(In millions of cubic feet)

County and geographic unit	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Floyd	251.0	25.7	5.4	.0	282.0	8.9
Harlan	237.5	70.8	12.4	.0	320.7	6.7
Knott	219.9	34.1	14.5	.0	268.6	8.4
Leslie	246.6	28.9	12.7	.0	288.2	8.6
Letcher	182.9	45.2	.0	.0	228.2	8.1
Martin	100.5	30.3	12.8	.0	143.6	11.8
Perry	180.1	40.5	4.0	.0	224.6	10.1
Pike	517.7	77.9	32.7	.0	628.3	6.3
Eastern Unit	1,936.3	353.4	94.4	.0	2,384.2	2.9
Carter	126.3	94.9	12.5	.0	233.7	8.5
Elliot	92.4	39.4	7.9	.0	139.7	9.7
Johnson	90.0	36.9	10.7	.0	137.7	16.4
Lawrence	140.5	55.4	21.4	.0	217.3	10.8
Lewis	265.1	63.2	29.0	.0	357.3	8.0
Magoffin	124.8	52.5	20.1	.0	197.4	8.9
Morgan	208.1	90.3	3.9	.0	302.3	12.2
Rowan	181.9	43.8	1.3	.0	227.0	7.1
Wolfe	127.9	41.1	2.2	.0	171.2	12.9
Boyd and Greenup	220.2	48.5	13.3	.0	282.0	10.9
Menifee and Powell	249.7	92.1	3.5	.0	345.3	8.2
Northern Cumberland Unit	1,826.9	658.2	125.8	.0	2,610.9	3.1
Bell	267.8	28.1	8.1	.0	304.1	9.2
Breathitt	224.3	75.5	52.8	.0	352.5	7.4
Clay	238.4	64.1	23.4	.0	325.8	9.2
Estill	97.5	29.8	8.1	.0	135.3	12.6
Jackson	169.8	28.4	6.7	.0	204.8	7.7
Knox	157.3	80.7	6.3	.0	244.2	10.2
Laurel	246.0	71.0	5.3	.0	322.3	7.3
McCreary	230.3	50.8	17.9	.0	299.0	8.8
Rockcastle	199.9	39.6	4.8	.0	244.3	8.4
Whitley	273.5	32.7	16.4	.0	322.6	8.0
Lee and Owsley	181.3	58.8	20.4	.0	260.5	8.8
Southern Cumberland Unit	2,286.0	559.4	170.1	.0	3,015.5	2.6
Owen	14.3	64.1	12.2	.0	90.5	13.8
Anderson and Washington	43.4	77.0	7.2	.0	127.5	11.6
Bath and Montgomery	90.5	37.1	2.1	.0	129.6	13.1
Boone, Campbell, Kenton	79.6	41.3	3.9	.0	124.8	17.2
Bourbon, Harrison, Nicholas	24.0	18.5	14.5	.0	57.0	30.6
Boyle and Lincoln	76.4	38.2	7.2	.0	121.8	19.1
Bracken and Robertson	7.6	17.1	12.8	.0	37.5	22.1
Carroll and Gallatin	42.6	30.2	2.6	.0	75.4	16.8
Clark, Fayette, Madison	71.7	32.2	11.2	.0	115.1	16.3
Fleming and Mason	127.2	25.4	.0	.0	152.7	12.8
Franklin, Scott, Woodford	26.2	52.1	12.5	.0	90.9	23.3
Garrard, Jessamine, Mercer	37.1	30.3	7.6	.0	75.1	19.8
Grant and Pendleton	86.4	31.6	24.1	.0	142.1	21.1
Henry, Shelby, Spencer	68.8	43.2	17.5	.0	129.5	11.5
Jefferson, Oldham, Trimble	117.7	16.4	18.0	.0	152.1	13.6
Bluegrass Unit	913.5	554.7	153.4	.0	1,621.7	4.4

Table 201.-continued

(In millions of cubic feet)

County and geographic unit	Stand-size class				All classes	S
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Adair	169.4	40.7	8.0	.0	218.1	10.9
Bullitt	139.0	33.1	.0	.0	172.1	12.9
Casey	164.0	46.3	2.1	.0	212.4	11.1
Cumberland	93.5	66.8	14.3	.0	174.6	12.1
Grayson	122.5	43.2	6.4	.0	172.1	15.2
Hardin	134.3	14.8	32.4	.0	181.5	15.4
Hart	93.4	42.4	3.3	.0	139.2	16.6
Marion	105.4	16.3	2.8	.0	124.5	13.8
Meade	101.3	25.5	3.4	.0	130.3	17.8
Metcalfe	84.9	24.8	14.8	.0	124.4	13.8
Nelson	112.4	25.5	6.4	.0	144.3	15.2
Pulaski	283.1	9.8	14.0	.0	306.9	7.8
Wayne	169.3	82.1	6.6	.0	258.1	6.9
Clinton and Russell	125.3	52.5	9.1	.0	187.0	9.0
Green, Larue, Taylor	171.4	35.7	11.3	.0	218.4	9.7
Breckenridge and Hancock	193.8	50.9	24.6	.0	269.3	8.6
Pennyroyal Unit	2,263.0	610.5	159.6	.0	3,033.2	2.9
Allen	76.0	40.4	5.9	.0	122.3	14.4
Butler	102.9	46.3	22.8	.0	172.0	13.8
Caldwell	107.7	11.3	5.3	.0	124.3	13.9
Christian	134.5	26.3	8.4	.0	169.2	8.3
Crittenden	101.1	48.4	7.1	.0	156.5	11.3
Hopkins	89.1	74.6	11.6	.0	175.3	14.6
Monroe	113.8	42.3	.0	.0	156.0	16.1
Muhlenberg	42.2	75.6	8.0	.0	125.8	14.2
Ohio	110.5	58.3	27.8	.0	196.6	12.8
Warren	64.6	13.7	10.7	.0	89.0	14.6
Logan, Simpson, Todd	170.6	60.7	7.2	.0	238.5	8.9
Daviess, Henderson, McLean	118.0	28.3	16.9	.0	163.2	18.3
Union and Webster	98.2	38.8	9.9	.0	146.9	21.7
Barren and Edmonson	234.8	22.1	3.5	.0	260.5	7.4
Western Coalfield Unit	1,564.2	587.1	145.0	.0	2,296.3	3.6
Calloway	92.3	17.3	5.1	.0	114.7	20.6
Graves	50.2	38.9	3.5	.0	92.7	18.1
Livingston	61.2	23.6	19.9	.0	104.7	14.2
Lyon	83.2	33.8	2.6	.0	119.6	17.5
Marshall	100.4	11.9	2.3	.0	114.6	11.6
Trigg	153.0	56.7	13.9	.0	223.6	12.2
Ballard and McCracken	90.9	10.9	8.2	.0	110.1	20.3
Carlisle, Fulton, Hickman	105.7	18.4	4.2	.0	128.3	20.1
Western Unit	736.9	211.6	59.7	.0	1,008.2	5.9
State total	11,526.8	3,535.0	908.1	.0	15,969.9	1.3
SE	2.3	4.5	7.0	.0	1.3	

Table 202.--Net volume of growing-stock and sawtimber trees on timberland by county, geographic unit, and species group, Kentucky, 1988

County and geographic unit	Growing stock (In millions of cubic feet)					Sawtimber (In millions of board feet)				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total growing stock	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total sawtimber
Floyd	5.1	.0	74.5	202.4	282.0	16.9	.0	279.0	660.8	956.7
Harlan	30.1	2.7	111.5	176.5	320.7	59.5	4.6	274.1	539.4	877.6
Knott	6.3	.2	107.4	154.7	268.6	10.2	.7	291.0	497.0	799.0
Leslie	1.9	.6	94.3	191.3	288.2	3.6	2.0	193.6	666.7	865.9
Letcher	3.2	3.6	104.6	116.7	228.2	4.7	12.8	231.4	379.6	628.4
Martin	4.9	1.1	46.9	90.7	143.6	18.0	3.7	121.0	266.1	408.9
Perry	6.3	.2	85.9	132.2	224.6	6.7	.5	239.4	429.6	676.2
Pike	7.2	1.8	234.8	384.5	628.3	22.0	4.9	640.6	1,339.8	2,007.3
Eastern Unit	65.1	10.2	860.0	1,448.9	2,384.2	141.7	29.2	2,270.2	4,779.0	7,220.0
Carter	21.2	.7	66.8	145.0	233.7	37.5	1.6	175.9	363.2	578.2
Elliot	10.9	.0	30.5	98.3	139.7	34.7	.0	82.0	260.9	377.7
Johnson	10.2	5.1	33.8	88.6	137.7	18.5	17.1	104.0	254.3	393.9
Lawrence	12.8	.0	41.4	163.1	217.3	27.8	.0	70.6	417.1	515.6
Lewis	5.7	.7	89.4	261.5	357.3	14.7	.0	200.8	773.8	989.4
Magoffin	10.3	.0	41.4	145.7	197.4	29.5	.0	147.7	476.1	653.4
Morgan	25.9	2.0	72.3	202.1	302.3	58.3	10.0	156.1	579.9	804.4
Rowan	2.6	2.4	46.9	175.2	227.0	7.8	7.9	110.9	447.7	574.3
Wolfe	28.2	.0	62.5	80.4	171.2	64.1	.0	159.4	211.9	435.3
Boyd and Greenup	26.1	.0	94.3	161.6	282.0	53.5	.0	266.0	493.4	812.9
Menifee and Powell	37.2	8.9	77.7	221.5	345.3	62.6	30.0	224.8	689.3	1,006.6
Northern Cumberland Unit	191.2	19.7	657.0	1,743.0	2,610.9	409.0	66.6	1,698.3	4,967.8	7,141.7
Bell	14.3	6.4	139.4	143.9	304.1	28.2	16.2	526.6	504.0	1,075.1
Breathitt	27.2	3.6	94.2	227.6	352.5	70.7	12.6	187.7	682.3	953.3
Clay	14.2	8.0	110.1	193.6	325.8	16.7	21.9	251.2	650.1	939.8
Estill	19.5	.0	39.3	76.5	135.3	40.9	.0	109.6	191.2	341.7

Table 202.-continued

County and geographic unit	Growing stock (In millions of cubic feet)					Sawtimber (In millions of board feet)				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total growing stock	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total sawtimber
Jackson	19.4	1.6	43.2	140.7	204.8	50.8	4.8	115.2	382.3	553.0
Knox	11.2	.0	116.1	116.9	244.2	24.3	.0	307.5	337.6	669.4
Laurel	48.3	5.1	82.9	185.9	322.3	127.5	15.9	226.1	644.1	1,013.6
McCreary	76.0	11.0	70.2	141.9	299.0	213.1	42.2	194.7	428.2	878.2
Rockcastle	25.4	4.6	58.0	156.2	244.3	65.6	4.0	192.1	451.9	713.6
Whitley	68.2	2.7	106.5	145.2	322.6	187.7	6.4	294.9	457.0	946.1
Lee and Owsley	36.4	3.8	62.4	157.9	260.5	92.1	15.6	157.1	439.2	704.0
Southern Cumberland Unit	360.2	46.8	922.3	1,686.3	3,015.5	917.5	139.6	2,562.7	5,167.9	8,787.7
Owen	.0	11.6	15.0	63.9	90.5	.0	6.1	18.7	119.7	144.5
Anderson and Washington	.0	10.9	42.9	73.6	127.5	.0	9.3	102.2	184.7	296.3
Bath and Montgomery	8.0	9.9	13.7	98.0	129.6	20.7	13.8	43.3	259.2	337.0
Boone, Campbell, Kenton	.0	.8	52.3	71.7	124.8	.0	.0	124.5	209.8	334.4
Bourbon, Harrison, Nicholas	.0	4.7	14.8	37.5	57.0	.0	1.4	37.9	88.8	128.2
Boyle and Lincoln	.6	.0	29.3	92.0	121.8	.3	.0	75.3	276.4	352.1
Bracken and Robertson	.0	6.7	4.1	26.8	37.5	.0	3.5	4.5	32.5	40.5
Carroll and Gallatin	.0	.8	22.2	52.4	75.4	.0	.5	49.4	116.8	166.8
Clark, Fayette, Madison	7.6	10.0	24.0	73.4	115.1	30.2	13.0	61.2	222.1	326.5
Fleming and Mason	28.2	6.3	38.8	79.4	152.7	68.6	3.9	100.7	215.9	389.1
Franklin, Scott, Woodford	.0	7.1	17.8	65.9	90.9	.0	8.5	22.0	141.2	171.7
Garrard, Jessamine, Mercer	.5	5.0	17.2	52.4	75.1	.0	6.5	28.2	127.8	162.4
Grant and Pendleton	.0	5.7	58.5	77.9	142.1	.0	3.6	177.8	196.0	377.4
Henry, Shelby, Spencer	.0	14.0	36.2	79.3	129.5	.0	19.7	79.8	186.9	286.4
Jefferson, Oldham, Trimble	.3	8.8	43.8	99.2	152.1	.8	15.6	140.4	268.4	425.2
Bluegrass Unit	45.2	102.3	430.9	1,043.4	1,621.7	120.7	105.5	1,065.9	2,646.2	3,938.3

Table 202.-continued

County and geographic unit	Growing stock (In millions of cubic feet)					Sawtimber (In millions of board feet)				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total growing stock	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total sawtimber
Adair	2.1	2.9	64.1	149.0	218.1	9.1	3.1	176.5	484.5	673.2
Bullitt	30.3	5.0	29.4	107.4	172.1	105.8	2.0	83.5	361.7	553.0
Casey	7.4	3.5	65.9	135.7	212.4	17.9	7.8	190.1	409.7	625.5
Cumberland	3.2	3.3	38.2	129.8	174.6	15.4	4.2	110.7	374.4	504.7
Grayson	17.6	3.2	30.7	120.6	172.1	44.1	5.3	79.3	303.6	432.2
Hardin	.5	3.6	72.5	104.9	181.5	1.2	4.9	226.7	360.4	593.2
Hart	19.2	16.7	31.1	72.2	139.2	53.4	17.2	85.5	211.7	367.8
Marion	3.2	.4	23.9	97.1	124.5	13.1	.0	76.5	298.6	388.2
Meade	.0	3.7	27.4	99.1	130.3	.0	3.1	60.0	336.4	399.5
Metcalfe	4.2	1.4	47.4	71.5	124.4	4.3	.4	144.5	186.1	335.3
Nelson	2.5	8.8	41.2	91.9	144.3	7.1	8.9	136.9	324.7	477.6
Pulaski	54.5	8.4	74.1	169.9	306.9	177.5	9.6	208.9	497.6	893.6
Wayne	12.7	6.3	84.7	154.3	258.1	32.2	2.0	211.7	418.3	664.1
Clinton and Russell	.4	5.9	67.5	113.2	187.0	1.0	3.6	149.6	320.5	474.7
Green, Larue, Taylor	3.6	6.5	53.7	154.6	218.4	12.6	6.1	136.5	511.8	667.0
Breckenridge and Hancock	.3	6.1	56.7	206.2	269.3	.4	8.2	156.7	676.8	842.2
Pennyroyal Unit	161.7	85.5	808.4	1,977.5	3,033.2	495.2	86.3	2,233.6	6,076.8	8,891.8
Allen	.0	9.3	39.6	73.3	122.3	.0	10.3	153.3	232.7	396.3
Butler	.0	2.8	35.9	133.3	172.0	.0	2.8	89.1	399.8	491.6
Caldwell	8.9	1.6	11.9	101.9	124.3	34.3	.0	37.1	317.5	388.9
Christian	6.3	1.4	27.3	134.1	169.2	26.8	.5	75.2	432.3	534.8
Crittenden	.0	.0	61.8	94.7	156.5	.0	.0	171.2	268.9	440.1
Hopkins	7.0	.4	71.7	96.2	175.3	9.7	1.6	145.2	277.0	433.6
Monroe	.9	2.2	50.4	102.6	156.0	2.4	4.5	167.8	299.9	474.6
Muhlenberg	3.8	4.2	33.4	84.4	125.8	2.6	3.0	66.1	210.6	282.3
Ohio	.0	2.7	50.5	143.5	196.6	.0	1.2	139.7	398.6	539.5

Table 202.-continued

County and geographic unit	Growing stock (In millions of cubic feet)					Sawtimber (In millions of board feet)				
	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total growing stock	Pine	Other softwoods	Soft hardwoods	Hard hardwoods	Total sawtimber
Warren	3.6	5.9	22.4	57.1	89.0	18.4	15.3	60.8	199.7	294.2
Logan, Simpson, Todd	4.7	9.2	53.8	170.7	238.5	9.3	7.1	122.0	495.9	634.3
Daviess, Henderson, McLean	5.9	.7	88.5	68.0	163.2	7.1	2.5	268.5	230.1	508.2
Union, Webster	.0	.0	70.7	76.2	146.9	.0	.0	201.6	222.9	424.4
Barren, Edmonson	5.3	4.8	85.5	164.8	260.5	2.8	2.6	298.9	565.3	869.6
Western Coalfield Unit	46.5	45.4	703.5	1,500.9	2,296.3	113.5	51.2	1,996.6	4,551.0	6,712.3
Calloway	11.4	1.1	44.2	58.0	114.7	38.4	.6	104.3	169.9	313.2
Graves	.8	1.8	32.4	57.6	92.7	2.0	6.8	64.5	204.2	277.5
Livingston	.0	.0	23.4	81.3	104.7	.0	.0	51.6	249.8	301.5
Lyon	.0	.2	28.6	90.9	119.6	.0	.4	84.4	259.5	344.3
Marshall	4.4	.0	29.2	81.0	114.6	17.7	.0	34.3	270.6	322.7
Trigg	9.5	4.0	41.1	169.0	223.6	30.8	3.9	101.5	572.4	708.7
Ballard and McCracken	4.8	.0	43.0	62.3	110.1	14.3	.0	145.0	215.8	375.2
Carlisle, Fulton, and Hickman	.0	.0	58.5	69.8	128.3	.0	.0	234.2	239,6	473.9
Western Unit	30.9	7.0	300.4	669.9	1,008.2	103.3	11.7	820.0	2,181.9	3,116.8
State total	900.7	316.8	4,682.4	10,069.9	15,969.9	2,300.8	490.1	12,647.2	30,370.6	45,808.6

Table 203.--Net volume of sawtimber trees on timberland by county, geographic unit, and forest-type group, Kentucky, 1988

(In millions of board feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Floyd	.0	.0	14.6	.0	928.6	.0	.0	13.5	.0	956.7	11.3
Harlan	.0	.0	36.1	18.5	671.1	.0	.0	151.9	.0	877.6	9.6
Knott	.0	.0	6.8	.0	781.3	.0	.0	10.9	.0	799.0	10.8
Leslie	3.0	.0	.0	.0	780.1	.0	.0	82.8	.0	865.9	10.9
Letcher	3.5	.0	.0	11.2	613.6	.0	.0	.0	.0	628.4	12.8
Martin	.0	.0	.0	14.5	394.4	.0	.0	.0	.0	408.9	17.1
Perry	.0	.0	4.1	.2	672.0	.0	.0	.0	.0	676.2	13.1
Pike	.0	.0	.0	18.6	1,824.3	.0	.0	164.4	.0	2,007.3	7.9
Eastern Unit	6.5	.0	61.6	63.1	6,665.3	.0	.0	423.4	.0	7,220.0	3.9
Carter	.0	.0	15.9	42.9	506.4	.0	.0	13.0	.0	578.2	12.2
Elliot	.0	.0	.0	18.0	359.6	.0	.0	.0	.0	377.7	15.7
Johnson	.0	.0	9.4	11.4	373.1	.0	.0	.0	.0	393.9	22.6
Lawrence	.0	.0	14.9	6.0	480.1	.0	14.7	.0	.0	515.6	14.2
Lewis	.0	.0	.0	.0	982.1	.0	7.3	.0	.0	989.4	10.2
Magoffin	.0	.0	24.1	10.7	539.7	.0	.0	78.9	.0	653.4	15.0
Morgan	.0	.0	17.3	35.5	751.6	.0	.0	.0	.0	804.4	15.1
Rowan	13.6	.0	.0	4.8	556.0	.0	.0	.0	.0	574.3	8.6
Wolfe	.0	.0	43.2	25.3	366.9	.0	.0	.0	.0	435.3	19.0
Boyd and Greenup	4.4	.0	11.6	49.4	689.6	.0	57.8	.0	.0	812.9	11.8
Menifee and Powell	68.0	.0	50.6	3.5	878.1	.0	.0	6.4	.0	1,006.6	13.5
Northern Cumberland Unit	85.9	.0	187.0	207.5	6,483.2	.0	79.8	98.3	.0	7,141.7	4.3
Bell	3.9	.0	20.4	.0	882.5	.0	19.5	148.8	.0	1,075.1	11.6
Breathitt	.0	.0	58.7	8.6	828.2	.0	.0	57.7	.0	953.3	12.6
Clay	.0	.0	20.5	.0	713.5	.0	.0	205.9	.0	939.8	14.3
Estill	.0	.0	26.6	49.6	265.5	.0	.0	.0	.0	341.7	18.6

Table 203.-continued

(In millions of board feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Jackson	.0	.0	3.7	32.4	516.9	.0	.0	.0	.0	553.0	10.9
Knox	.0	.0	29.9	5.5	634.0	.0	.0	.0	.0	669.4	14.4
Laurel	.0	.0	126.5	35.1	765.3	.0	60.7	26.1	.0	1,013.6	12.2
McCreary	19.5	.0	44.7	273.6	493.4	.0	27.0	20.1	.0	878.2	13.1
Rockcastle	.0	.0	28.8	86.2	575.0	.0	.0	23.6	.0	713.6	11.6
Whitley	.0	.0	202.2	66.6	540.0	57.1	31.9	48.3	.0	946.1	9.7
Lee and Owsley	.0	.0	55.5	55.6	551.8	.0	41.1	.0	.0	704.0	10.2
Southern Cumberland Unit	23.4	.0	617.4	613.2	6,766.1	57.1	180.1	530.4	.0	8,787.7	3.8
Owen	.0	.0	.0	22.8	113.2	.0	8.6	.0	.0	144.5	24.6
Anderson and Washington	.0	.0	11.0	.0	130.3	.0	55.7	99.3	.0	296.3	21.4
Bath and Montgomery	.0	.0	6.2	40.6	290.3	.0	.0	.0	.0	337.0	26.0
Boone, Campbell, Kenton	.0	.0	.0	.0	101.5	.0	16.4	216.4	.0	334.4	29.9
Bourbon, Harrison, Nicholas	.0	.0	.0	3.6	103.5	.0	21.1	.0	.0	128.2	49.4
Boyle and Lincoln	.0	.0	.0	.0	348.9	.0	.0	3.2	.0	352.1	30.9
Bracken and Robertson	.0	.0	1.0	4.9	34.6	.0	.0	.0	.0	40.5	45.7
Carroll and Gallatin	.0	.0	.0	4.3	127.5	.0	30.1	4.8	.0	166.8	27.2
Clark, Fayette, Madison	.0	.0	4.3	66.5	230.8	.0	24.9	.0	.0	326.5	23.9
Fleming and Mason	.0	.0	41.0	50.1	271.2	.0	.0	26.8	.0	389.1	18.4
Franklin, Scott, Woodford	.0	.0	3.7	8.4	149.0	.0	.0	10.8	.0	171.7	30.6
Garrard, Jessamine, Mercer	.0	.0	.0	12.6	67.6	.0	82.2	.0	.0	162.4	24.8
Grant and Pendleton	.0	.0	.0	1.6	179.1	.0	194.6	2.0	.0	377.4	34.4
Henry, Shelby, Spencer	.0	.0	24.6	12.3	186.3	.0	19.8	43.4	.0	286.4	17.4
Jefferson, Oldham, Trimble	.0	.0	.0	54.6	287.5	.0	56.9	26.1	.0	425.2	12.6
Bluegrass Unit	.0	.0	91.7	282.2	2,621.3	.0	510.4	432.7	.0	3,938.3	7.1

Table 203.-continued

(In millions of board feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Adair	.0	.0	.0	30.7	594.1	.0	.0	48.3	.0	673.2	15.9
Bullitt	.0	.0	124.9	50.8	333.7	.0	.0	43.6	.0	553.0	14.5
Casey	.0	.0	6.0	54.2	551.2	.0	14.1	.0	.0	625.5	14.2
Cumberland	.0	.0	10.3	28.6	410.0	.0	.0	55.8	.0	504.7	19.2
Grayson	.0	.0	75.6	2.7	329.4	.0	.0	24.6	.0	432.2	18.3
Hardin	.0	.0	.0	12.4	379.3	.0	107.5	93.9	.0	593.2	17.0
Hart	.0	.0	53.1	33.2	183.4	.0	70.2	27.8	.0	367.8	24.5
Marion	.0	.0	.0	.0	346.8	.0	.0	41.4	.0	388.2	20.9
Meade	.0	.0	.0	.7	398.8	.0	.0	.0	.0	399.5	22.7
Metcalfe	.0	.0	.0	5.8	302.8	.0	.0	26.8	.0	335.3	20.0
Nelson	.0	.0	13.2	26.6	298.0	.0	139.8	.0	.0	477.6	19.9
Pulaski	.0	.0	60.9	267.2	549.0	.0	.0	16.6	.0	893.6	11.4
Wayne	.0	.0	12.9	50.8	558.7	.0	.0	41.7	.0	664.1	10.8
Clinton and Russell	.0	.0	.0	21.8	452.9	.0	.0	.0	.0	474.7	12.8
Green, Larue, Taylor	.0	.0	6.1	.0	444.3	.0	86.3	130.2	.0	667.0	14.5
Breckenridge and Hancock	.0	.0	4.0	22.5	741.3	.0	26.2	48.3	.0	842.2	11.6
Pennyroyal Unit	.0	.0	367.1	607.9	6,873.6	.0	444.3	599.0	.0	8,891.8	4.0
Allen	.0	.0	.0	45.0	300.2	.0	2.8	48.4	.0	396.3	20.5
Butler	.0	.0	.0	15.9	423.5	.0	.0	52.3	.0	491.6	18.7
Caldwell	.0	.0	.0	68.5	249.3	26.6	26.5	18.1	.0	388.9	17.7
Christian	.0	.0	15.3	44.5	439.2	28.7	7.0	.0	.0	534.8	8.6
Crittenden	.0	.0	.0	.0	279.6	.0	139.7	20.8	.0	440.1	15.9
Hopkins	.0	.0	6.5	19.7	316.4	40.4	50.6	.0	.0	433.6	15.3
Monroe	.0	.0	.0	.0	417.8	.0	.0	56.8	.0	474.6	23.1
Muhlenberg	.0	.0	.0	11.5	130.7	16.5	19.7	103.9	.0	282.3	20.8
Ohio	.0	.0	.0	.0	426.2	7.3	32.2	73.7	.0	539.5	17.5

Table 203.-continued

(In millions of board feet)

County and geographic unit	Forest-type group									All groups	SE
	White/ red pine	Spruce/ fir	Loblolly/ shortleaf	Oak/ pine	Oak/ hickory	Oak/gum/ cypress	Elm/ash/ red maple	Northern hardwoods	Aspen/ birch		
Warren	.0	.0	.0	66.9	214.5	.0	12.9	.0	.0	294.2	17.4
Logan, Simpson, Todd	.0	.0	10.0	12.4	601.0	.0	7.6	3.3	.0	634.3	14.5
Daviess, Henderson, McLean	.0	.0	7.1	.0	303.9	11.3	186.0	.0	.0	508.2	21.6
Union and Webster	.0	.0	.0	.0	214.3	51.6	158.6	.0	.0	424.4	21.6
Barren and Edmonson	.0	.0	.0	.0	723.2	.0	43.2	103.2	.0	869.6	9.2
Western Coalfield Unit	.0	.0	38.8	284.3	5,039.6	182.5	686.6	480.4	.0	6,712.3	4.6
Calloway	.0	.0	43.9	.0	247.9	.0	21.4	.0	.0	313.2	25.5
Graves	.0	.0	.0	3.3	237.4	.0	36.9	.0	.0	277.5	25.4
Livingston	.0	.0	.0	.0	277.9	.0	13.7	9.8	.0	301.5	20.5
Lyon	.0	.0	.0	1.2	342.4	.0	.7	.0	.0	344.3	21.3
Marshall	.0	.0	.0	21.0	257.6	.0	16.3	27.7	.0	322.7	19.5
Trigg	.0	.0	34.3	.0	674.4	.0	.0	.0	.0	708.7	15.0
Ballard and McCracken	.0	.0	.0	34.2	222.8	.0	110.8	7.3	.0	375.2	23.9
Carlisle, Fulton, Hickman	.0	.0	.0	.0	182.5	.0	231.2	60.2	.0	473.9	25.4
Western Unit	.0	.0	78.2	59.7	2,442.8	.0	431.0	105.2	.0	3,116.8	7.7
State total	115.8	.0	1,441.8	2,118.0	36,891.9	239.5	2,332.1	2,669.4	.0	45,808.6	1.8
SE	61.5	.0	13.5	12.0	2.2	40.5	14.7	12.9	.0	1.8	

Table 204.--Net volume of sawtimber trees on timberland by county, geographic unit, and stand-size class, Kentucky, 1988

(In millions of board feet)

County and geographic unit	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Floyd	880.0	54.1	22.6	.0	956.7	11.3
Harlan	743.9	105.1	28.6	.0	877.6	9.6
Knott	708.4	72.9	17.7	.0	799.0	10.8
Leslie	786.4	50.7	28.8	.0	865.9	10.9
Letcher	551.8	76.5	.0	.0	628.4	12.8
Martin	324.6	54.9	29.4	.0	408.9	17.1
Perry	601.8	61.0	13.4	.0	676.2	13.1
Pike	1,752.3	167.8	87.2	.0	2,007.3	7.9
Eastern Unit	6,349.2	643.0	227.8	.0	7,220.0	3.9
Carter	371.0	168.7	38.6	.0	578.2	12.2
Elliot	295.5	63.5	18.7	.0	377.7	15.7
Johnson	314.4	63.8	15.7	.0	393.9	22.6
Lawrence	394.3	67.3	54.1	.0	515.6	14.2
Lewis	811.4	111.3	66.7	.0	989.4	10.2
Magoffin	500.7	98.6	54.1	.0	653.4	15.0
Morgan	633.9	163.6	6.8	.0	804.4	15.1
Rowan	502.0	67.6	4.7	.0	574.3	8.6
Wolfe	359.8	69.7	5.8	.0	435.3	19.0
Boyd and Greenup	686.0	85.7	41.2	.0	812.9	11.8
Menifee and Powell	846.4	147.4	12.8	.0	1,006.6	13.5
Northern Cumberland Unit	5,715.3	1,107.2	319.2	.0	7,141.7	4.3
Bell	998.3	56.5	20.3	.0	1,075.1	11.6
Breathitt	730.4	120.2	102.6	.0	953.3	12.6
Clay	789.7	96.7	53.4	.0	939.8	14.3
Estill	278.0	48.5	15.2	.0	341.7	18.6
Jackson	485.2	49.4	18.5	.0	553.0	10.9
Knox	497.6	156.8	15.0	.0	669.4	14.4
Laurel	898.8	108.6	6.1	.0	1,013.6	12.2
McCreary	769.1	84.6	24.6	.0	878.2	13.1
Rockcastle	617.6	92.6	3.4	.0	713.6	11.6
Whitley	841.1	61.7	43.3	.0	946.1	9.7
Lee and Owsley	556.9	103.6	43.5	.0	704.0	10.2
Southern Cumberland Unit	7,462.6	979.1	345.9	.0	8,787.7	3.8
Owen	39.7	82.9	21.8	.0	144.5	24.6
Anderson and Washington	127.4	152.9	16.0	.0	296.3	21.4
Bath and Montgomery	281.9	53.7	1.4	.0	337.0	26.0
Boone, Campbell, Kenton	275.3	46.9	12.2	.0	334.4	29.9
Bourbon, Harrison, Nicholas	69.0	38.4	20.7	.0	128.2	49.4
Boyle and Lincoln	266.6	78.6	6.8	.0	352.1	30.9
Bracken and Robertson	20.8	15.1	4.6	.0	40.5	45.7
Carroll and Gallatin	113.1	49.4	4.3	.0	166.8	27.2
Clark, Fayette, Madison	237.2	60.2	29.1	.0	326.5	23.9
Fleming and Mason	364.3	24.8	.0	.0	389.1	18.4
Franklin, Scott, Woodford	88.3	75.4	8.1	.0	171.7	30.6
Garrard, Jessamine, Mercer	117.1	36.2	9.1	.0	162.4	24.8
Grant and Pendleton	310.2	37.7	29.4	.0	377.4	34.4
Henry, Shelby, Spencer	190.2	47.9	48.3	.0	286.4	17.4
Jefferson, Oldham, Trimble	346.2	29.3	49.7	.0	425.2	12.6
Bluegrass Unit	2,847.3	829.4	261.6	.0	3,938.3	7.1

Table 204.-continued

(In millions of board feet)

County and geographic unit	Stand-size class				All classes	SE
	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked		
Adair	564.4	80.3	28.4	.0	673.2	15.9
Bullitt	487.2	65.8	.0	.0	553.0	14.5
Casey	526.0	97.5	1.9	.0	625.5	14.2
Cumberland	354.5	126.9	23.3	.0	504.7	19.2
Grayson	349.2	74.1	9.0	.0	432.2	18.3
Hardin	468.0	32.2	93.0	.0	593.2	17.0
Hart	293.9	68.9	5.0	.0	367.8	24.5
Marion	350.8	29.6	7.8	.0	388.2	20.9
Meade	324.8	66.8	8.0	.0	399.5	22.7
Metcalfe	247.5	32.4	55.4	.0	335.3	20.0
Nelson	413.4	47.9	16.3	.0	477.6	19.9
Pulaski	855.0	14.8	23.9	.0	893.6	11.4
Wayne	483.0	172.6	8.5	.0	664.1	10.8
Clinton and Russell	354.6	108.3	11.8	.0	474.7	12.8
Green, Larue, Taylor	595.7	58.3	13.0	.0	667.0	14.5
Breckenridge and Hancock	658.1	116.9	67.2	.0	842.2	11.6
Pennyroyal Unit	7,326.0	1,193.2	372.6	.0	8,891.8	4.0
Allen	286.6	94.6	15.0	.0	396.3	20.5
Butler	369.2	67.1	55.3	.0	491.6	18.7
Caldwell	357.8	24.6	6.5	.0	388.9	17.7
Christian	460.6	49.7	24.6	.0	534.8	8.6
Crittenden	335.5	92.2	12.4	.0	440.1	15.9
Hopkins	288.5	118.6	26.5	.0	433.6	15.3
Monroe	392.9	81.7	.0	.0	474.6	23.1
Muhlenberg	124.7	149.0	8.6	.0	282.3	20.8
Ohio	372.2	102.8	64.6	.0	539.5	17.5
Warren	218.2	39.7	36.2	.0	294.2	17.4
Logan, Simpson, Todd	538.7	83.5	12.1	.0	634.3	14.5
Daviess, Henderson, McLean	415.4	69.7	23.1	.0	508.2	21.6
Union and Webster	318.1	79.8	26.5	.0	424.4	21.6
Barren and Edmonson	815.3	51.5	2.9	.0	869.6	9.2
Western Coalfield Unit	5,293.6	1,104.5	314.2	.0	6,712.3	4.6
Calloway	270.0	27.8	15.3	.0	313.2	25.5
Graves	195.0	77.0	5.5	.0	277.5	25.4
Livingston	212.2	45.2	44.1	.0	301.5	20.5
Lyon	256.9	83.1	4.3	.0	344.3	21.3
Marshall	308.5	14.1	.0	.0	322.7	19.5
Trigg	526.3	127.2	55.2	.0	708.7	15.0
Ballard and McCracken	340.5	23.3	11.3	.0	375.2	23.9
Carlisle, Fulton, Hickman	440.2	25.3	8.4	.0	473.9	25.4
Western Unit	2,549.6	423.0	144.2	.0	3,116.8	7.7
State total	37,543.6	6,279.5	1,985.5	.0	45,808.6	1.8
SE	2.5	5.0	8.0	.0	1.8	

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1017. Number of all live trees on timberland by diameter class, tree class, and species group
1018. Number of trees (5.0+ inches d.b.h.) on timberland by species and tree class
1021. Number of growing-stock trees (5.0+ inches d.b.h) on timberland by forest type and species

List of Available Tables (continued)

1040. Number of growing-stock trees (5.0+ inches d.b.h) on timberland by species and general damage
1041. Number of all live trees on timberland by species and browse-utilization class
1043. Number of cull trees (5.0+ inches d.b.h) on timberland by species and general damage
1044. Number of live trees (1.0+ inches d.b.h.) on timberland by species and diameter class
1045. Number of growing-stock trees (1.0+ inches d.b.h.) on timberland by species and diameter class

Cubic-foot volume tables--available at State, Unit, and County levels

2011. Gross volume of all live trees on timberland by species and diameter class
2012. Net volume of growing-stock trees on timberland by expanded species and tree-size class
2013. Net volume of growing-stock trees on timberland by species and diameter class
2014. Net volume of growing-stock trees on timberland by expanded species and diameter class
2018. Gross volume of all trees on timberland by species and tree class
2019. Sound volume of all trees on timberland by species and tree class
2020. Net volume of all trees on timberland by species and tree class
2021. Net volume of growing-stock trees on timberland by forest type and species
2025. Net volume of all live trees on timberland by class of timber and species group
2026. Net volume of growing-stock trees on timberland by forest type and stand-size class
2027. Net volume of growing-stock trees on timberland by forest-type group and ownership class
2028. Net volume of growing-stock trees on timberland by forest-type group and basal-area class
2030. Net volume of growing-stock trees on timberland by species and stand-size class
2031. Net volume of growing-stock trees on timberland by species and cubic-foot stand-volume class
2032. Net volume of growing-stock trees on timberland by sawtimber/poletimber and species group
2033. Net volume of growing-stock trees on timberland by forest type and physiographic class
2034. Volume suitable for pulpwood on timberland by species, tree type and size
2035. Net volume of growing-stock trees on timberland by forest type and elevation class
2121. Net volume of growing-stock trees on timberland by species and forest-type group
2126. Net volume of growing-stock trees on timberland by forest-type group and stand-size class
2127. Net volume of all trees on timberland by class of timber and species group
2128. Net volume of all live, growing-stock, and sawtimber trees on timberland by species group and ownership class
2129. Net volume of growing-stock in the sawlog portion of sawtimber trees on timberland by species and diameter class

List of Available Tables (continued)

Board-foot volume tables--available at State, Unit, and County levels

3013. Net volume of sawtimber trees on timberland by species and diameter class
3014. Net volume of sawtimber trees on timberland by expanded species and diameter class
3026. Net volume of sawtimber trees on timberland by forest type and stand-size class
3027. Net volume of sawtimber trees on timberland by forest-type group and ownership class
3040. Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade (<15", >15", Total grade 1, etc.)
3041. Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade (<15" LG1, <15" LG2,...>15" LG4, Tot)
3042. Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade (>15" LG1, >15" LG2,...All sizes LG4)
3045. Net volume of sawtimber trees on timberland by species, size class, and tree grade

Biomass tables (dry weight)--available at State, Unit, and County levels

4000. Net dry weight of all live softwood trees on timberland by diameter class and stand-size class
4001. Net dry weight of all live hardwood trees on timberland by diameter class and stand-size class
4010. Net dry weight of all trees on timberland by class of material and species group
4012. Net dry weight of all live trees on timberland by species and diameter class
4013. Net dry weight of the merchantable stem of growing-stock trees on timberland by species and diameter class
4014. Net dry weight of growing-stock trees (5.0+ inches d.b.h.) on timberland by species and diameter class
4015. Net dry weight of all live trees (5.0+ inches d.b.h.) on timberland by species and diameter group
4016. Net dry weight of all live trees on timberland by type of tree and component, and age class
4020. Net dry weight of all live trees on timberland by forest type and stand-size class
4021. Net dry weight of all live trees on timberland by forest-type group and stand-size class
4022. Net dry weight of all live trees on timberland by treatment-opportunity class and forest-type group
4030. Net dry weight of cull trees (5.0+ inches d.b.h.) on timberland by forest-type group and stand-size class
4031. Net dry weight of cull trees (5.0+ inches d.b.h.) on timberland by species group and diameter group
4032. Net dry weight of cull trees (5.0+ inches d.b.h) on timberland by type of tree and component, and species group

List of Available Tables (continued)

Wildlife tables--available at State, Unit, and County levels

5001. Number of all live nut- and fruit-producing trees on timberland by species and diameter class
5002. Number of shrubs and saplings on timberland by stand-size class, type of stem, and mast type
5003. Number of standing dead trees (5.0+ inches d.b.h.) on timberland by species, condition class, and diameter class
5004. Number of standing trees (5.0+ inches d.b.h.) with observed cavities on timberland by species and condition class
5005. Number of seedlings, saplings, and shrubs on timberland by species and stand-size class
5006. Number of seedlings, saplings, and shrubs on timberland by species and forest-type group
5007. Number of seedlings, saplings, and shrubs on timberland by species and browse-utilization class
5008. Number of standing trees (5.0+ inches d.b.h.) with observed cavities on timberland by species and presence of cavities
5009. Number of snags (5.0+ inches d.b.h.) on timberland by expanded species and diameter class
5010. Number of standing trees (5.0+ inches d.b.h.) with observed cavities on timberland by expanded species and diameter class

Growth tables--available at State and Unit levels

9113. Number of all growing-stock trees on timberland by species and diameter class (1988)
9114. Number of all growing-stock trees on timberland by species and diameter class (1975)
9201. Average annual net growth of growing-stock volume on timberland by species and component of growth
9202. Average annual net change of growing-stock volume on timberland by species and component of change
9203. Total net growth of growing-stock volume on timberland by species and component of growth
9204. Total net change of growing-stock volume on timberland by species and component of change
9213. Current (1988) net volume of growing-stock trees on timberland by species and diameter class
9214. Previous (1975) net volume of growing-stock trees on timberland by species and diameter class
9301. Average annual net growth of sawtimber volume on timberland by species and component of growth
9302. Average annual net change of sawtimber volume on timberland by species and component of change

List of Available Tables (continued)

9303. Total net growth of sawtimber volume on timberland by species and component of growth
9304. Total net change of sawtimber volume on timberland by species and component of change
9313. Current (1988) net volume of sawtimber trees on timberland by species and diameter class
9314. Previous (1975) net volume of sawtimber trees on timberland by species and diameter class

Recalulated 1975 tables--available at State and Unit levels

0020. Area of timberland by forest type, forest-type group, and stand-size class
0028. Area of timberland by forest-type group and stocking class of all live trees
0029. Area of timberland by forest-type group and stocking class of growing-stock trees
0051. Area of timberland by board-foot stand-volume class and ownership class
0053. Area of timberland by forest-type group and ownership class
1012. Number of all growing-stock trees on timberland by species and diameter class
2012. Net volume of growing-stock trees on timberland by expanded species and tree size
2013. Net volume of growing-stock trees on timberland by species and diameter class
2021. Net volume of growing-stock trees on timberland by forest type and species
2025. Net volume of all live trees on timberland by type of tree and softwoods and hardwoods
2026. Net volume of growing-stock trees on timberland by forest type and stand-size class
2030. Net volume of growing-stock trees on timberland by species and stand-size class
2032. Net volume of growing-stock trees on timberland by sawtimber/poletimber and softwoods/hardwoods
3013. Net volume of sawtimber trees on timberland by species and diameter class
3040. Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade
3042. Net volume of sawtimber trees on timberland by species, size class, and standard-lumber log grade

Core tables--available at State and Unit levels

C001. Area by county and land class
C002. Area of timberland by county and ownership class
C003. Area of timberland by county and forest-type group
C004. Area of timberland by county and stand-size class
C005. Area of timberland by county and productivity class
C006. Area of timberland by county and stocking-percent class of growing-stock trees
C007. Area of timberland by forest-type group and ownership class
C008. Area of timberland by ownership class and stocking-percent class of growing-stock trees
C009. Area of timberland by forest-type group and stand-size class
C010. Number of live trees on timberland by species and diameter class
C011. Number of growing-stock trees on timberland by species and diameter class

List of Available Tables (continued)

C012.	Volume of growing stock on timberland by species and diameter class
C013.	Volume of growing stock in the sawlog portion of sawtimber trees on timberland by species and diameter class
C014.	Volume of sawtimber on timberland by species and diameter class
C015.	Volume of growing stock and sawtimber on timberland by county and species group
C016.	Volume of timber on timberland by class of timber and species group
C017.	Volume of live trees and growing stock on timberland by ownership class and species group
C020.	Average net annual growth and average annual removals of growing-stock volume on timberland by species
C021.	Average net annual growth and average annual removals of sawtimber volume on timberland by species
C022.	Average annual mortality of growing-stock and sawtimber volume on timberland by species
C023.	Average annual net growth and average annual removals of growing-stock volume on timberland by ownership & species
C024.	Average net annual growth and average annual removals of sawtimber volume on timberland by ownership & species
C025.	Volume of sawtimber on timberland by species and log grade

County tables--available at State level

8001.	Net land area by county, geographic unit, and land class (excludes productive and unproductive reserved land)
8002.	Area of timberland by county, geographic unit, and ownership class
8020.	Area of timberland by county, geographic unit, and stand-size class
8021.	Area of timberland by county, geographic unit, and forest-type group
8025.	Area of timberland by county, geographic unit, and cubic-foot stand-volume class
8027.	Area of timberland by county, geographic unit, and dry ton stand-volume class
8029.	Area of timberland by county, geographic unit, and stocking class of growing-stock trees
8050.	Area of timberland by county, geographic unit, and expanded ownership class
8051.	Area of timberland by county, geographic unit, and ownership class
8052.	Area of timberland by county, geographic unit, and site productivity class
8213.	Net volume of growing-stock trees on timberland by county, geographic unit, and species
8220.	Net volume of all live trees on timberland by county, geographic unit, and species
8227.	Net volume of growing-stock trees on timberland by county, geographic unit, and forest-type group
8230.	Net volume of growing-stock trees on timberland by county, geographic unit, and stand-size class
8232.	Net volume of growing-stock and sawtimber trees on timberland by county, geographic unit, and species group
8313.	Net volume of sawtimber trees on timberland by county, geographic unit, and species
8326.	Net volume of sawtimber trees on timberland by county, geographic unit, and stand-size class
8327.	Net volume of sawtimber trees on timberland by county, geographic unit, and forest-type group

Alerich, Carol L. 1990. **Forest statistics for Kentucky--1975 and 1988.** Resour. Bull NE-117. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 295 p.

A statistical report on the fourth forest survey of Kentucky (1988). Findings are displayed in 204 tables containing estimates of forest area, number of trees, timber volume, tree biomass, and timber products output. Data are presented at three levels: state, geographic unit, and county.

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